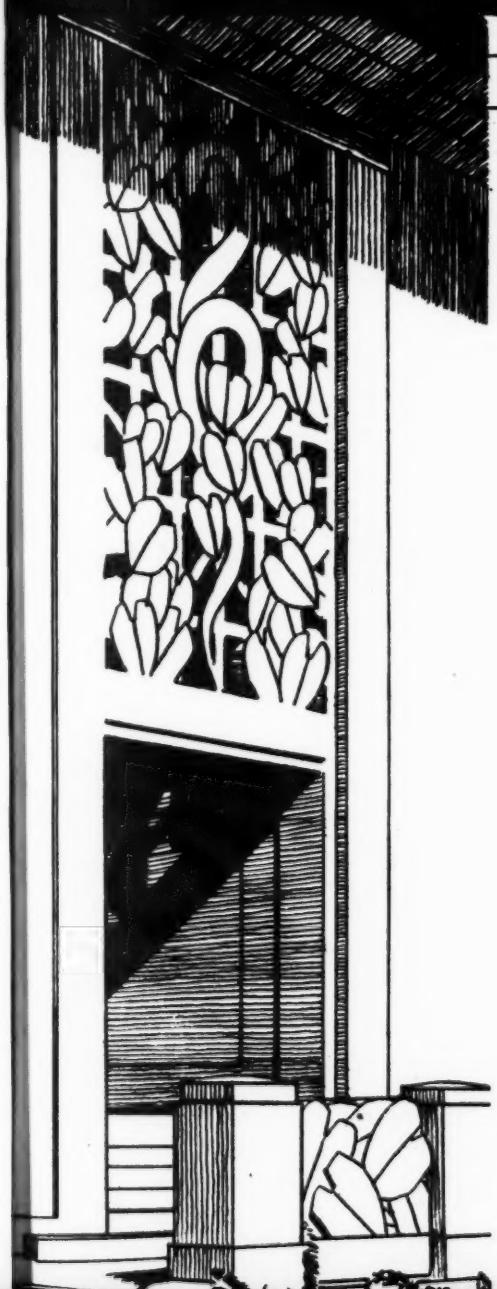
HAWAII MEDICAL JOURNAL



JUL 1 0 1945

VOLUME 4 MAY-JUNE, 1945 NUMBER 5

[illegible] Library

MEDICAL AND SURGICAL ADVANCES IN WORLD WAR II

CAPTAIN HOWARD K. GRAY, MC, USNR

COL. FORRESTER RAINE, MC, AUS

LT. COL. HERMAN L. MELTZER, MC, AUS

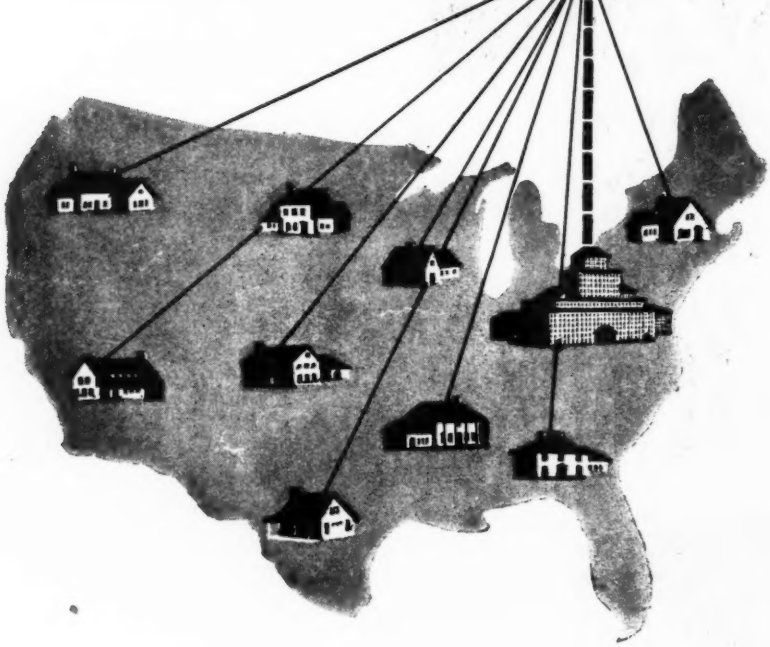
COMDR. ALBERT WORTH HOBBY, MC, -- V(S), USNR

TERRITORIAL ASSOCIATION OF PLANTATION PHYSICIANS

H. M. PATTERSON, M.D.

SUPPORT THE SEVENTH WAR LOAN DRIVE!

9 out of 10 cases of EPILEPSY are treated in the home



Hawaii Territorial Medical Association

1945 – 1946

OFFICERS

Eric A. Fennel, Honolulu . . . . . President
R. T. Eklund, Pahala . . . . . Vice President from Hawaii County
F. J. Halford, Honolulu . . . . . Vice President from Honolulu County
I Umaki, Kapaa . . . . . Vice President from Kauai County
George von Asch, Puunene . . . . . Vice President from Maui County
L. A. R. Gaspar, Honolulu . . . . . Secretary
Lyle G. Phillips, Honolulu . . . . . Treasurer

COUNCILLORS

R. J. McArthur, Maui . . . . . Term ends 1946
S. R. Wallis, Maui . . . . . Term ends 1946
L. L. Sexton, Hawaii . . . . . Term ends 1947
D. B. Bell, Honolulu . . . . . Term ends 1947
F. J. Pinkerton, Honolulu . . . . . Term ends 1948
T. H. Richert, Honolulu . . . . . Term ends 1948

DELEGATES

Hawaii County:

Archie Orenstein
H. M. Patterson
H. E. Crawford (alternate)
G. Tomoguchi (alternate)

Kauai County:

T. Hata
A. W. Boyden (alternate)

Maui County:

R. J. McArthur

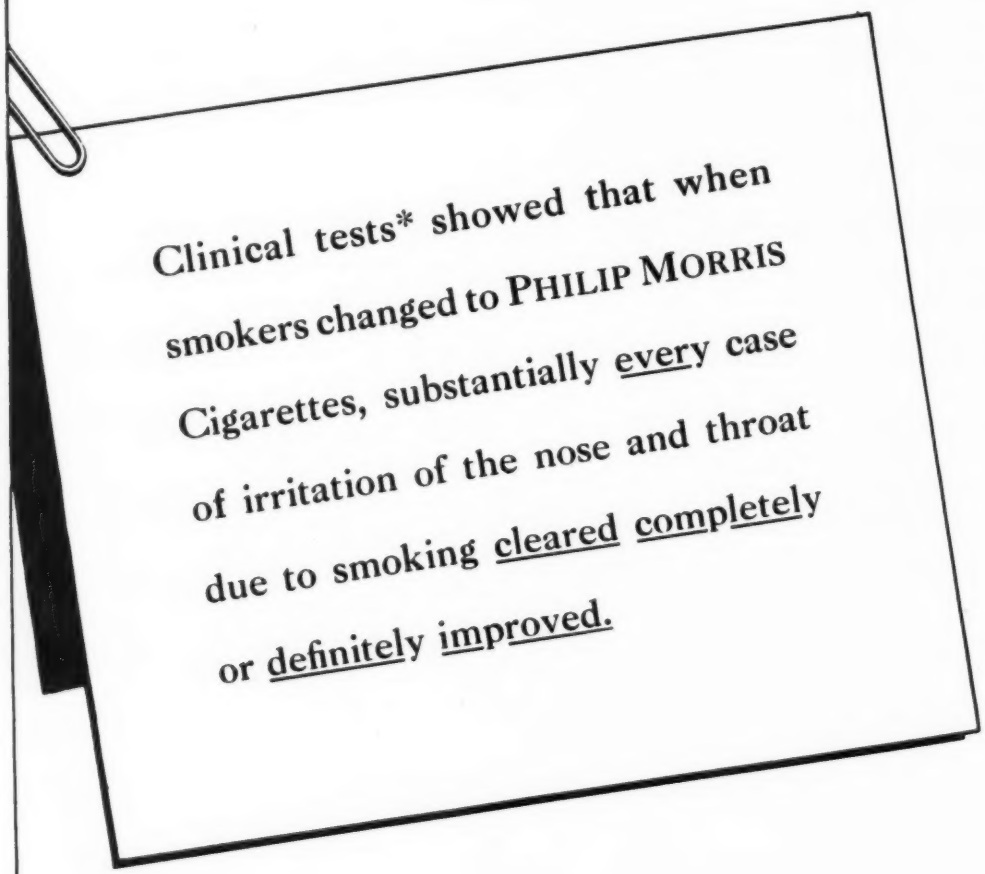
Honolulu County:

P. S. Irwin
H. S. Dickson
D. C. Marshall
W. H. Wynn
M. A. deHarne
H. T. Rothwell
F. D. Nance
L. Q. Pang
Leon Mermod (alternate)
M.E. Stevens (alternate)
R. D. Kepner (alternate)
Wm. Shanahan (alternate)
W. Chung (alternate)
T. F. Fujiwara (alternate)

OFFICERS — COUNTY SOCIETIES

	Hawaii	Kauai	Maui	Honolulu
President	R. T. Eklund, Pahala	I. Umaki, Kapaa	George von Asch, Puunene	F. J. Halford
Vice President	W. F. Leslie, Hilo	T. Hata, Kapaa	W. D. Balfour, Wailuku	R. L. Hill
Secretary	S. Mizuire, Hilo	H. W. Harris, Lihue	John Sanders, Paia	H. E. Bowles (cor.) M. Gordon (rec.)
Treasurer	H. B. Yuen, Hilo	H. W. Harris, Lihue	John Sanders, Paia	H. C. Gotshalk

29 WORDS
tell the story...


Clinical tests* showed that when
smokers changed to PHILIP MORRIS
Cigarettes, substantially every case
of irritation of the nose and throat
due to smoking cleared completely
or definitely improved.

Laryngoscope, Feb. 1935, Vol. XLV, No. 2—149-154.

TO THE PHYSICIAN WHO SMOKES A PIPE: We suggest an unusually fine new blend—COUNTRY DOCTOR PIPE MIXTURE. Made by the same process as used in the manufacture of Philip Morris Cigarettes.

HAWAII MEDICAL JOURNAL

Volume 4
Number 5

MAY-JUNE, 1945

$2.00 per yr.
35c per copy

Published Bi-monthly by

THE HAWAII TERRITORIAL MEDICAL ASSOCIATON

(Incorporated in 1856 under the Monarchy)

Mabel L. Smyth Memorial Building
510 S. Beretania St.
Honolulu, Hawaii, U. S. A.

TABLE OF CONTENTS

SOME OF THE SURGICAL LESSONS LEARNED IN WORLD WAR II

Capt. Howard K. Gray, M.C., U.S.N.R..... 233

ADVANCES IN SURGERY DURING THE PRESENT WAR

Col. Forrester Raine, M.C., A.U.S..... 236

SOME OF THE MEDICAL LESSONS LEARNED IN WORLD WAR II

Lt. Col. Herman L. Meltzer, M.C., A.U.S..... 239

CLINICAL ADVANCES IN MEDICAL PROBLEMS OCCASIONED BY WORLD WAR II

Comdr. Albert Worthy Hobby, M.C.-V(S), U.S.N.R. 243

AIMS AND ASPIRATIONS OF THE TERRITORIAL ASSOCIATION OF PLANTATION PHYSICIANS

H. M. Patterson, M.D..... 246

EDITORIALS

THE RELATIONSHIP BETWEEN THE PRIVATE PHYSICIAN AND THE HEALTH DEPARTMENT 249

LETTERS TO THE EDITOR.....250, 251

LEPROSY AS SEEN AT CARVILLE..... 250

BOOK REVIEW 252

PROGRESSIVE MUSCULAR DYSTROPHY: AN AVITAMINOSIS? 252

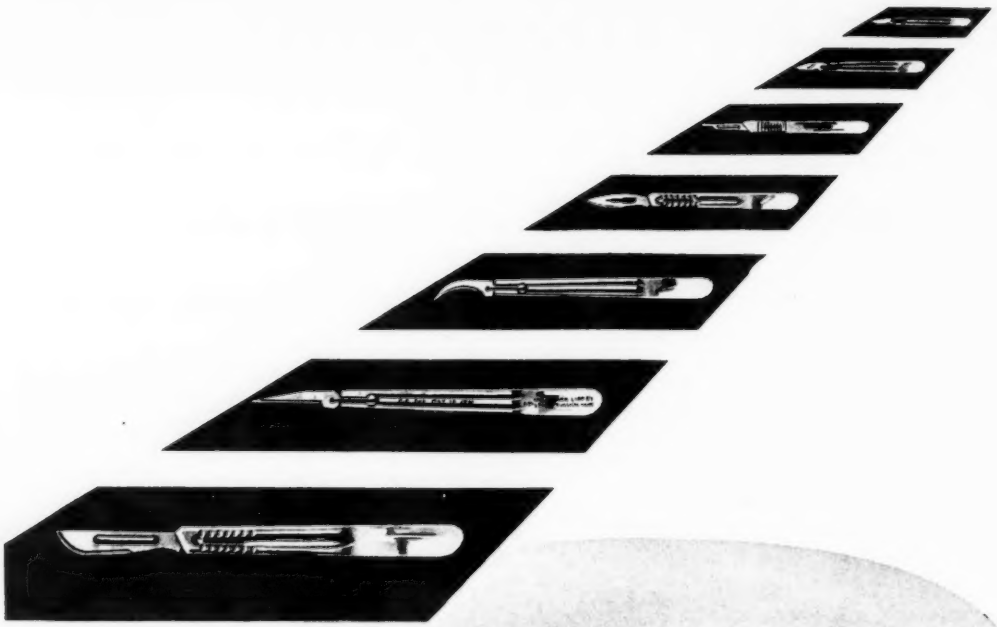
COUNTY SOCIETY REPORTS..... 253

LIBRARY NOTES 257

NOTES AND NEWS..... 259

The JOURNAL may not be held responsible for opinions expressed in papers, discussions, communications, or advertisements. The advertising policy of the HAWAII MEDICAL JOURNAL is governed by the rules of the Council on Pharmacy and Chemistry of the American Medical Association. The right is reserved to reject material submitted for editorial or advertising columns. All material for publication must be in the hands of the editor on or before the 15th day of the month preceding publication date. Reprints of original articles will be supplied at actual cost, provided request is attached to manuscript, or made in sufficient time before publication. A reasonable number of cuts and illustrations accompanying an article will be accepted for printing. The right is reserved to ask the author to bear the cost of these when it is found necessary to do so.

Copyright, 1944, by the Hawaii Territorial Medical Association, Honolulu, Hawaii. Entered as second-class matter, October 17, 1941, at the Post Office in Honolulu, Hawaii, under the Act of August 24, 1912. Office of Publication: Mabel L. Smyth Memorial Building, 510 S. Beretania St., Honolulu 13, Hawaii.



SELECT YOUR SULFONAMIDES AS YOU WOULD A SCALPEL

It is axiomatic that good surgery requires good tools—tools that fit the job at hand. It is no less important to select the proper sulfonamide in an appropriate dosage form to meet and deal most effectively with specific infections.

Sulfonamides, Lilly, for systemic and local administration, are provided in a complete variety of dosage forms for every indication. They are quickly available through the drug trade.

Eli Lilly and Company, Indianapolis 6, Indiana, U. S. A.

☆

Some of the Surgical Lessons Learned in World War II

CAPTAIN HOWARD K. GRAY, M.C.,U.S.N.R.

When one contemplates the human anguish and misery caused by death, injury (with or without mutilation), disease, deprivation in many instances of even the bare necessities of life, disruption of homes, property damage, personal and governmental indebtedness of staggering proportions, loss of many of our spiritual and moral values, and the many other destructive sequelae of war too numerous to mention, it is with great pleasure that one is privileged to speak, even though sketchily and superficially, of some of the lessons learned in the present war which benefit rather than destroy our fellow man.

That advance in scientific knowledge is the interest received on an investment of unlimited effort on the part of scoreless investigators and observers is readily apparent, but how much greater would have been the result if the same effort required in the prosecution of a war had been expended in time of peace toward the solution of problems yet unsolved. Significant advances *have* been made in surgery and internal medicine in the past war years, and they stand in sharp contrast to the black backgrounds. The most significant advances have been made in the preceding years of peace, however, and not infrequently the fact that the groundwork for scientific progression has been laid during these years of peace has been overlooked. Too much credit cannot be given those who have taken advantage of opportunities afforded them in the present circumstances and by so doing have added to our total fund of information. Even more credit should be heaped upon those who have produced tirelessly and without acclaim the building materials upon which the structures have been erected about which we wish to speak to you this evening.

SURGICAL SHOCK

A case in point is the condition referred to as "surgical shock." Since 1795, when James Latta first introduced the term "shock," numerous hypotheses have been advanced to explain this condition. It must be admitted that not all factors concerned in the production of surgical or traumatic shock are understood fully; yet an understanding of the established physiologic bases for present day hypotheses regarding shock is essential to the surgeon or to the internist on whom may rest the responsibility of dealing with this condition. Physiologically, the basic difference between primary shock (where the symptoms immediately follow the injury) and secondary shock (where the symptoms may not appear for one to four hours after injury) is the appreciable loss of effective circulating blood volume associated with the latter condition. Such a loss does not occur to the same degree, if at all, in connection with primary shock. The hypotheses advanced to explain secondary shock have been concerned with exhaustion, fat embolism, acidosis, acapnia, toxemia, and loss of fluid locally into the tissues. Experience and investigative work of World War I suggested the hypothesis that toxins present in the blood cause traumatic shock, and there are many who subscribe to this supposition, at least in part. It has been the experience of most surgeons that shock may become manifest immediately after removing a tourniquet and this has led finally to a widespread practice of leaving the tourniquet in place until amputation of the affected limb has been performed proximal to the tourniquet. Time does not permit me to digress on a dissertation of the "Use and Misuse of a Tourniquet." Suffice it to say that experimental shock has been produced repeatedly by traumatizing a limb when the femoral vein was occluded. As a poorly applied tourniquet may cause, or at least contribute to, a state of shock, many observers have mentioned tourniquets only to condemn their use. In these tourniquet experiments it was noted that with the release of the obstruction to the femoral vein, no further decrease in the blood pressure occurred nor was there remarkable evidence of shock when similar trauma was inflicted when both artery and vein were occluded. If one accepts the hypothesis regarding toxin as a cause of shock, blood obtained from the femoral vein of a traumatized limb if injected into another animal, would be expected to cause a fall in blood pressure. Experiments have shown that it does not. In fact, if an animal's blood pressure was lowered because of hemorrhage, it was subsequently raised by injection of blood from the traumatized limb. These observations indicated that the loss of fluid locally was the important factor in the production of shock and that the cause was not the elaboration of some toxic substance. It may be prudent, however, to point out that although much evidence may be advanced against the hypothesis that toxins present in the blood cause shock, yet the practical applications arising from the observations on which the hypothesis was based should not be neglected.

The factor common to all types of traumatic shock has been the reduction in the effective circulating blood volume, resulting in reduced cardiac output, slowing of the peripheral circulation, fall in blood pressure, progressive circulatory failure, and tissue hypoxia. There seems to be a common agreement that hemoconcentration occurs in the shocked state, in spite of differences of opinion as to where and

Read before the Honolulu County Medical Society, November 17, 1944. Approved for publication. The opinions and views set forth in this article are those of the writer and are not to be considered as reflecting the policies of the Navy Department.

how the liquid element of the blood has escaped from the circulating blood volume, and that substances with large molecular size, when introduced into the blood stream, will increase the osmotic tension of the plasma and thus attract fluid from the tissue spaces back into the circulating blood. One thought may be interjected relative to the condition of hemorrhagic shock, which, of course, is rarely seen unaccompanied by trauma of varying degrees. Why, it may be argued, should there be hemoconcentration where hemorrhage alone has occurred? For one would expect dilution of blood and pale, ischemic viscera in contradistinction to that seen in traumatic shock where hemoconcentration, congestion of viscera, engorgement of capillaries, edema of tissues, petechial hemorrhages, and effusion into serous cavities have been the classical pathologic findings. It has been explained, by those who subscribe to the loss-of-fluid theory, that the differences between the pathologic picture of shock and of hemorrhage are dependent on the lapse of time following the injury. Should the hemorrhagic process terminate early, the tissues are said to be pale and ischemic, and the blood will be diluted by the body fluids. When there has been long and continued hemorrhage, however, there has seemed to be a more progressive loss of fluid from the blood due to anoxemia and to increased permeability of the capillaries, so that the blood becomes more concentrated. It should be emphasized again that pure hemorrhagic shock is rarely seen, for in practically all instances of severe hemorrhage, there has been associated trauma of more or less degree. Conversely, however, not all instances of traumatic shock are necessarily associated with hemorrhage; witness the shock associated with severe burns, about which Colonel Raine will speak to you subsequently.

Prior to World War II, in addition to general measures, therapeutic efforts were directed toward restoring an effective volume of circulating blood, but these efforts were limited to the use of blood transfusions, the intra-venous injection of saline or glucose solutions or both, and the intra-venous injection of a solution of acacia. The perfection of the use of human plasma under these circumstances has been considered to be the most significant contribution in the present war and the greatest single factor in the reduction of mortality as compared to World War I. It should be stressed that in those patients where severe hemorrhage has occurred and where a reduction of oxygen-carrying erythrocytes has progressed to such a low point that the tissues are suffering from hypoxia in spite of adequate volume of circulating blood, nothing can possibly be as effective therapeutically as a transfusion of whole blood. On the other hand, in shock states such as those observed with severe burns, where the cellular elements of the blood have not been diminished in quantity, human plasma is the substance of choice.

Emphasis has been placed recently on the use of human serum albumin as a blood substitute in shock. Objections to this substance have been that it supplies only the protein mainly responsible for the maintenance of osmotic pressure of the plasma and does *not* supply prothrombin, complement, or antibodies. Human serum albumin cannot be considered an entirely satisfactory substitute for blood nor for plasma, although it is a valuable adjunct to our therapeutic armamentarium, particularly where storage or transportation space is at a premium. It is extremely hypertonic and will draw tissue fluids into the blood stream and thus increase the effective circulating blood volume. It should be borne in mind, however, that shipwrecked survivors and wounded or injured persons are usually dehydrated and in negative nitrogen balance. Therefore, it is necessary to use clinical judgment in prescribing this substance. In re-hydration, plasma is indicated and albumin contraindicated unless adequate additional fluids are administered concomitantly. Human albumin may be used with markedly beneficial results in many instances where cerebral edema exists.

A recent conference on gelatin as a blood substitute—National Research Council—has shown that this substance is unsatisfactory because of the instability of the liquid preparations, the slowness of solubility of the dried product, the necessity of warming when dissolving the dried preparation, its non-reproductibility, its heterogeneity with respect to molecular size, its pyrogenicity, and its tendency toward pseudo-agglutination of red cells.

Recent reports by committees of the National Research Council on adrenal cortical extract are to the effect that this substance has no discernible beneficial effect on traumatic or burn shock in man.

WOUNDS

Prior to the surprise attack on Pearl Harbor, now nearly three years ago, reports on the topical application of sulfonamides were rare in sufficiently large series of cases to be of great significance. Following this tragedy, the surprisingly good appearance of wounds in which minor debridement was done, where one of the sulfonamides was applied topically, and where the closed plaster method of wound dressing was utilized quite extensively, led to a rather widespread impression that wound excision was no longer necessary. That this was an unfortunate impression is the feeling of most surgeons who have had the opportunity subsequently of seeing wounds treated in this manner in the forward areas. Considerable confusion has arisen in the use of such terms as "debridement," "wound revision," and "wound excision." Suffice it to say that devitalized tissue will never again become vital, and the only satisfactory method of treating a fresh wound is by the surgical removal of as much devitalized tissue as is reasonably possible. Consequently, if a wounded person is seen within twelve hours, even twenty-four to forty-eight hours,

of the time his injury was inflicted, every effort should be made to thoroughly excise his wounds by removing all devitalized tissue—particularly muscle—and to irrigate the depths of the wound with copious quantities of sterile water or sterile physiologic saline solution. By neglecting to do so, an excellent culture medium is afforded, particularly for gas-producing organisms, and a potentially infected wound thereby may be converted to a manifestly infected wound with all its inherent serious sequelae. The use of closed plaster should be undertaken with caution if at all, and with the full realization that gas gangrene may develop under the cast and its presence may pass undetected until systemic symptoms appear. A false sense of security has been engendered by reports of large series of cases from regions where gas gangrene has been seen only infrequently. It should be understood that this dreaded complication is still a serious problem and that the most effective treatment is to attempt to prevent its development by radical and wide excision of all devitalized tissue, for gas-producing organisms are anaerobic and will not develop in most instances where adequate oxygen is being brought to the tissues in which it has been inoculated.

The topical use of sulfonamides has been the subject of considerable disagreement. One of the most serious deficiencies of the bacteriostatic sulfonamides in topical application has been their failure in the presence of pus. Sulfonamides have been found to be bacteriostatic when, within the organism, they replace para-amino-benzoic acid. The latter is evidently essential in the enzyme system of the bacteria; it has been termed a bacterial vitamin. Without it organisms do not grow and multiply. It has been noted that where protein is being broken down in the presence of pus, blood, plasma, or other tissue protein, so much para-amino-benzoic acid is liberated that few bacteria suffer a deficiency of this substance. A new English chemical called "Propamadine" has been described, for which satisfactory germicidal effects are claimed even in the presence of pus. It will be recalled that the effectiveness of topically applied sulfonamides was thought to be enhanced many-fold if the wound was irrigated first with a chlorine-containing substance such as Dakin's Solution, Hy-chlorite, or Azochloramide.

The successful topical application of dried red blood cells which had been salvaged in the preparation of plasma and which were allowed to age for as long as twenty days, has been reported as a local agent in the treatment of such wounds as open ulcers and old infected burns. A paste of type "O" red blood cells obtained from the same source has been described also and its use observed in the treatment of ulcers and chronically infected and indolent wounds. It has not been advocated as a panacea for chronically infected wounds, indolent ulcers, et cetera, but has seemed to be an effective therapeutic agent in selected cases. Its effect was thought to be due to the supply of necessary nutritional elements or proteins to tissues which may be deficient in these substances; to the crust which was considered to be a protective covering, a source of nourishment, a scaffolding for the support of connective tissue; and to the effect of the red blood corpuscles, which were purported to stimulate the growth of granulation tissue and to act as a medium for the growth of epithelial cells over the granulating surfaces.

ABDOMINAL SURGERY

The principle of exteriorization of a wound of the large bowel is perhaps the most important advance in this war in the surgery of the abdomen. In World War I, the death rate in injuries of the colon was about 70 per cent; in injuries of the rectum, about 90 per cent. The mortality rate for injuries of the large bowel in this war has been approximately 50 per cent. It has been stressed by competent authority that if the injured part of the large bowel is mobile, it should be extraperitonealized. If the injured part of the large bowel is fixed, the injury should be repaired and a colostomy made proximal to the injury. Any injury of the rectum demands a proximal colostomy. Not infrequently, a small wound of the colon can be extraperitonealized rapidly, and held in place by a small glass rod under the loop of bowel or by a pair of clamps, and thus save valuable time for the patient and for those who may be awaiting urgent attention.

"Fibrin Foam" is a new clinical tool which has emerged from the plasma fractionation program. It has been developed for use with thrombin solutions to fill the need for a topical hemostatic agent which may be left in situ without fear of excessive or injurious tissue reaction. This substance would probably have its greatest field of usefulness in neurologic surgery where dural oozing, bleeding from a lacerated longitudinal sinus, bleeding after removal of a brain tumor, and bleeding after removal of a dislocated intervertebral disc, have been found to be so stubborn in many instances. If adequate trial proves this material to be effective, one can visualize its value in controlling bleeding from the kidney, the liver, the spleen, the lung, and the heart. The suture of wounds by means of plasma-thrombin adhesion has also been described.

In an address before the annual meeting of the American College of Physicians, Brigadier General Hugh Morgan stated that the death rate of all wounded in World War I was 8.1 per cent, while the death rate of all wounded in the present war, up to the date of his statement, was 3.3 per cent. That a reduction of nearly 60 per cent in the mortality rate of all wounded has been achieved in spite of the markedly greater effectiveness of all the instruments of war, is a tribute to the medical professional and to the vast army of laymen who have cooperated whole-heartedly in the program of the care of the sick and the wounded.

In conclusion, may I say it is a record of which we all have just cause to be proud.

Advances in Surgery During the Present War

COLONEL FORRESTER RAINE, M.C., A.U.S.

In our attempts to cover the advances made in surgery during this war, Dr. Gray has talked on the very important subjects of shock, wound debridement, wound revision and abdominal injury. I hope that in my share of the subject, I will be able to cover it in as concise and able a manner.

BURNS

Burns constitute one of the larger problems of warfare. Probably in no other field have there been as great advances in treatment as in this. I shall first list phases of treatment which are rather universally agreed upon and then discuss those elements in which there is still some difference of opinion.

The systemic treatment

Morphine immediately and in adequate doses is essential. It is possible that this point has been stressed so much that occasionally we see individuals who have had overdoses. As in other types of shock, morphine subcutaneously is not immediately absorbed, and when circulation is improved, cumulated dosage may be too great. Repeated half-grain doses are seldom indicated.

Blood plasma. In no other field of therapy is plasma so important as in the treatment of burns. Seldom do these patients need blood, at least in the early stages of treatment, but they are in tremendous need of plasma. This must be given in dosage which a few years ago we would have considered enormous; but it is only by replacing the loss of plasma in the body as rapidly as possible and maintaining blood proteins and blood concentration at a normal level that we can prevent the damage to all cells of the body resulting from gross imbalance in the blood. The amount of plasma needed can be estimated by hematocrit readings, but it must be remembered that these estimates tend to lag behind the actual needs of the individual. Hematocrit determination soon after the burn does not give us an estimate of the amount of plasma that will be needed in the course of the next several hours, but rather is an indication of our immediate dosage, and subsequent determinations are necessary to estimate the amount of replacement therapy which must be carried out. Roughly, mild burns will have their blood balance restored with about 500 cc. of plasma, while moderate burns may require as much as 1,500 cc., and severe burns may need as much as 5 to 6,000 cc. in the course of forty-eight hours.

Fluids: Besides plasma, burned patients require a considerable amount of fluid. In many instances this can be taken by mouth in sufficient quantity, but in severe burns, the intravenous route is necessary, and normal saline and glucose should be administered in sufficient amounts to maintain an adequate urinary output. The great controversy on the subject of chloride replacement in burns, which raged a few years ago, has dropped into a rather secondary role since we found that plasma replacement is the primary need. There is, of course, some loss of salt, but salt should not be administered even in the strength of normal saline in large amounts over several days because it simply adds to the burden already placed on the kidneys. Many patients develop generalized edema because of too much salt.

In speaking on the subject of burns to some of the members of this audience a year ago, I stated that it was my belief that early and adequate plasma replacement would do away with many of the signs and symptoms which occur on the third, fourth and fifth day following burns, which at that time were attributed to toxemia and infection. It is now apparent that many of these symptoms were due to prolonged imbalance in blood constituents, and that the early correction of this imbalance and the maintenance of normal blood relationships has done away with many of these complications.

Local treatment

Cleaning: Good surgical principles indicate a meticulous cleaning of burned areas, but good surgery also takes into consideration the condition of the individual. Minor burns can be cleaned thoroughly without danger to the life of the patient; but large, severe burns can seldom be cleaned thoroughly. It should be a matter of grave concern to a surgeon who has meticulously cleaned a tremendous burned area, spending an hour or so in this endeavor, to have the patient die in two, three or four hours. Certainly some share in the cause of this death should be laid directly at the surgeon's door, because these patients cannot stand such a cleaning process.

There is now, I think, universal agreement that pressure dressings in all parts of the body are the best possible form of local treatment. It is also beginning to be agreed that an entirely bland, greasy base such as vaseline is superior to boric acid or other types of ointments. Such a bland, fine-meshed dressing should be applied first, followed by sterile gauze and then by a bulky, compressible dressing such as cotton waste, and pressure applied by means of an elastic type of bandage. Results by this method of

Read before the Honolulu County Medical Society, November 17, 1944. Approved for publication. The opinions and views set forth in this article are those of the writer and are not to be considered as reflecting the policies of the War Department.

local treatment have so far surpassed any of the tanning agents that they should no longer be considered.

We come now to some of the disputed parts in treatment. Should we give sulfonamides or penicillin systemically? It is rather generally agreed that one of the two should be used and it would seem now that the preference is shifting to penicillin, when it is felt that control of infection is likely to play an appreciable part in healing. The use of sulfonamides locally on a burned area is still in dispute. If sulfonamide crystals or powders are used directly on the burned surface in large burns, overdosage is certainly a grave danger, and rather frequently occurs. Sulfonamides in vaseline or in a water-soluble ointment are almost never absorbed to the point of toxicity but at the same time may have very little influence on the control of the infection. Penicillin locally has been used in the later stages of burns when some infection is present but it has not been attended by unqualified success.

CHESTS

Wounds of the chest may be divided into those of the wall and those penetrating into the thoracic cavity. They comprise about 30 per cent of all battle casualties. Accurate figures for most wars have not been available but it appears that this figure is approximately correct through the American Civil War and through the First World War. Because of the serious nature of these wounds, a great many of these patients do not reach medical installations but die on the field, and as a result we find that only approximately 8 per cent of the wounded reaching medical installations have wounds of the chest wall or thoracic cavity. This figure has not altered appreciably during the wars from the American Civil War to the present time, and this in spite of the great increase in effectiveness and wounding potentiality of weapons. The only answer I can see is that efficiency of evacuation, and the speed with which wounded reach medical installations, have increased proportionately. The character of the wounds has also changed materially. They may be divided into bullet wounds and wounds from high explosive. During the American Civil War, 9 out of 10 wounds were from bullets, during the First World War about 3 out of 10, and during the present war about 2 out of 10. As a general rule, bullet wounds produce far less destruction and it is therefore apparent that we are dealing now with a very high percentage of serious wounds from high explosive.

Great progress was made in the treatment of thoracic wounds during the First World War, and I am afraid that in the early stages of this war we failed to follow directions which were pointed out rather clearly by medical officers of the last war who were dealing with chest wounds. Some of the lessons which Colonel Yates summarized were disregarded and it is only recently that we have again re-discovered their truth. Part of the reason for this disregard was that civil experience did not quite tally with war experience. The great majority of penetrating wounds of the chest seen in civil practice were from smaller caliber bullets, knives, icepicks, etc., which did not produce much tissue damage. It was found that these chests, although they developed a hemothorax, cleared without treatment, and a "hands off" policy therefore developed. Such a policy, applied to war wounds with large-caliber bullets and with high explosive projectiles, does not work. Massive hemothorax with clot formation occurs, which is not readily observed, and in many instances the clot must be evacuated by open thoracotomy when aspiration does not effect its removal. Very briefly we may enumerate the accepted treatment of thoracic wounds at the present time.

1. Bullet wounds without appreciable rib damage, and therefore only minor trauma to underlying lung. Hemothorax here is likely to be only moderate and there is seldom much pneumothorax. These patients do not require appreciable debridement and their hemothorax is readily absorbed without sequelae.

2. Bullet wounds with considerable rib damage and high-explosive wounds from smaller pieces of metal which produce moderate damage to the chest wall and moderate laceration of the lung. These patients, although they may not have an appreciable sucking wound, have injury to both intercostal and lung vessels and develop massive hemothorax. Seldom is there appreciable pneumothorax. Meticulous debridement of the chest wall should be done and deeper structures closed to make it air tight. The skin may be left open if desired. Aspiration of the massive hemothorax should be begun possibly within twenty-four hours, certainly within seventy-two, and all of the blood should be evacuated in the course of several days. Early in the war some surgeons felt that air replacement should be carried out when blood was aspirated, but I think that this concept has been pretty thoroughly discredited. Bleeding from the lung itself is usually minor and will have ceased in twenty-four hours regardless of external pressure. Air replacement tends to collapse the upper lobe and to maintain collapse, which is exactly the opposite of what is desired in the chest.

3. Wounding with extensive damage to chest wall and underlying lung, usually from high-explosive, produces a severe sucking wound of the chest which must be closed temporarily by any means at hand. Definitive treatment with repair of the chest wall should be done as early as possible; it must be meticulous, because massive suturing under tension simply leads to breakdown and infection. If the inner chest wall cannot be closed without tension, the lung itself should be brought up and sutured to the opening. Extensive laceration of the lung should be repaired. In all of these serious wounds it is advisable to use

air-tight drainage, using either a flutter valve or under-water drainage.

4. Massive hemothorax, which does not yield to aspiration, or hemothorax with gas bacillus infection, requires wide-open thoracotomy and manual evacuation of the clot. If this is not done as soon as the patient can stand it, within the first ten days to two weeks, extensive fibrosis occurs, and then decortication is necessary to permit re-expansion of the lung. It is these cases which, if not cared for thoroughly in the early stages, lead to chronic empyema, persistent lung collapse, and extensive residual diminution in vital capacity.

5. Combined thoraco-abdominal injuries are the most difficult to handle. On the left side it may be possible to manage the entire operation from the chest side, taking care of the abdominal injury through the diaphragm. Frequently, however, the abdominal injuries cannot be adequately investigated from this approach and it will be wise to do the chest first and then make an additional abdominal incision. On the right side, when abdominal injury is confined to the liver, it can easily be handled through the chest, and no abdominal incision is necessary. If there is any question in the mind of the operator as to whether there is additional injury to a hollow viscus, it should be investigated through an incision which will give adequate exposure.

The exact role played by sulfonamides and penicillin is not yet determined. Certainly these patients should be given sulfonamides early and they may be used to great advantage locally at the time of definitive treatment. Penicillin thus far seems to have more influence on the mixed infection always present than does any sulfonamide, and rather large doses should be used parenterally following definitive treatment, as a prophylactic, or for the control of infection when it exists. Penicillin locally in the pleural cavity appears to be of considerable benefit and at least until our knowledge of its action is more thoroughly understood, it will be wise to use it. Wide open thoracotomy and evacuation of clot, and the use of penicillin locally and systemically, have been of great aid in controlling gas bacillus infection. Neither sulfonamides nor penicillin obviate the necessity for meticulous surgery, and any attempts to compensate for inadequate, ill-advised, or ill-timed surgery will result in nothing but disappointment.

COMPOUND FRACTURES

Compound fractures represent one of the commonest war injuries and, with the associated soft tissue, vascular and nerve injuries, constitute one of the gravest problems encountered. The fond hopes of some that sulfonamides systemically and locally would prevent infection in these wounds have not been realized. Sulfonamides and penicillin, however, permit surgery which would not have been deemed possible a few years ago. The accepted methods of treatment are about as follows:

Doctor Gray has already discussed wound debridement and wound revision, so I shall not go into those matters in detail. Splinting by first aid man at a first aid station is, of course, essential. Definitive treatment with wound debridement is being accomplished by competent surgeons at a far earlier date than seemed possible a year or so ago. Transportation to more fixed installations in the rear is being done more and more rapidly with immobilization by plaster cast. Here reduction is accomplished and maintained by either skeletal traction or plaster, whichever method best suits the individual case. At this point one of the greatest advances which this war has seen is noted. Secondary closure of wounds, particularly those of compound fractures and those into joints, is being carried out earlier and earlier, with the inevitable result of greatly reduced healing-time. Furthermore, preservation of function is far more complete. These secondary closures are made possible by proper initial debridement and by the added safety against infection acquired from sulfonamides and penicillin. In the most skillful hands it is even found possible to use internal metallic fixation without having osteomyelitis develop. This means of maintenance of reduction, however, should be done only by those most skilled and experienced, for certainly the ill-advised use of metallic fixation in compound fractures if generally practiced will lead to disastrous results. This concept of the care of compound fractures differs rather radically from that practiced in the early stages of this war. Then immobilization by plaster was carried out with infection present, and healing occurred in spite of the infection, sulfonamides being used to minimize its local and systemic effects. The present endeavor is to secure healing by skillful surgery and the use of either sulfonamides or penicillin. Without infection the results are what one might hope for. Healing is occurring without tremendous loss, fibrosis, or both, of the surrounding soft tissues. Joints can be closed secondarily, resulting in relatively normal function. In summarizing the various advances made by surgery in this present war the following points are outstanding:

1. Early adequate first aid with the immediate use of sulfonamides to minimize the development of infection in contaminated wounds.

2. Early thorough wound debridement with virtually no primary suture except in scalp and face.

3. Early, rather complete secondary suture which may be called reparative surgery, to minimize loss of tissues and fibrosis by infection.

Some of the Medical Lessons Learned in World War II

LIEUTENANT COLONEL HERMAN L. MELTZER, M.C., A.U.S.

War has been defined as the most violent relation that may exist between groups of people[1]. The paradox which has softened the disastrous effects of the struggle between nations has been the impetus given to scientific advancement by war. Such impetus has been imparted by the need for obtaining advantages over the enemy through the discovery of new things. The development of a drug to supplant quinine for the suppression of malaria is an example of a lesson which has been learned in this war. The ability of American science and industry to furnish an adequate supply of the drug as opposed to the Japanese inability to achieve a similar effect has been of tactical advantage to the American Army.

In almost every war new principles of medicine have been learned. The sanitary codes of biblical times are known to all. The Romans likewise achieved advances in sanitation[2], including waterborne sewage. During the Renaissance many new methods were developed in the field. These were primarily in surgery and due chiefly to the perspicacity of Ambroise Pare. At the siege of Malaga (Aug. 1487) the use of field hospitals was instituted by direction of Queen Isabella of Spain[3] and the use of such installations has continued until the present. Regulations on sanitation promulgated by Maximilian I in 1555 served as models upon which the present medical regulations of the German Army are based[4].

PREVENTIVE MEDICINE

In all wars the loss of manpower through preventable disease has exceeded the loss due to wounds[5]. In the present war methods of disease prevention are being accumulated and applied so rapidly that it appears that disease will not produce the greater number of casualties. In this paper some of the lessons learned in preventive medicine during World War II are presented.

The problem of disease prevention in troops during war is acute because of overcrowding and the necessity for living in the field where modern sanitary aids are not available. Many of the lessons learned through military necessity will, no doubt, be of value in civilian life after the cessation of hostilities. Thus, the Army has had the opportunity for testing on a large scale the value of periodic physical examinations, a multitude of immunizing procedures, and well distributed facilities for hospitalization. Similar procedures applied to civilian students, industrial plants, or equivalent bodies should prove of value in future years.

One of the lessons learned in earlier wars but reemphasized in this one is the necessity for frequent and careful examination of the individual for detection of the early manifestations of disease. Prior to induction into the Army all applicants are given a thorough physical examination including whatever laboratory tests are necessary to exclude disease. After induction a physical inspection is made of all troops once each month and studies conducted on individuals found to have any defect. Each soldier has access to an Army dispensary or equivalent unit, even when in combat. Army hospitals are so organized and maintained that hospitalization is always available to everyone. At times it is necessary for hospitals at the front to operate in tents.

In addition to the many immunizing procedures which are now common knowledge, new vaccines have been and are being developed. Thus, beside the usual immunizations for smallpox and typhoid fever, troops may be immunized for cholera, plague, yellow fever, typhus, influenza and other diseases. The development of a practical means of active immunization for tetanus by use of a toxoid has resulted in that disease being practically unknown in this war.

Research is being conducted on the development of vaccines for bacillary dysentery, the virus diseases, and the rickettsial diseases by the Army Medical Department. A fairly effective vaccine for influenza appears to be available and it is likely that vaccines for the groups of diseases mentioned above may be available soon.

INSECT CONTROL

One of the great lessons in preventive medicine learned in this war has been the need for closer team work between the physician and members of the sciences allied to medicine, that is, the entomologist, the bacteriologist, the sanitary engineer, and the industrial hygienist. The chief enemies with which the medical entomologist has had to contend are the mosquitoes, flies, mites, and ticks. Among the mosquito enemies are the well known Anopheles which carries malaria; the Aedes mosquito which transmits dengue and yellow fever; and the Culex mosquito which is believed capable of transmitting filariasis. The house fly, musca domestica, is known to disseminate bacillary dysentery by mechanically carrying infected stool particles from latrines to food. The mite, louse, and flea transmit typhus and plague.

New mosquito repellents have been developed. The time honored oil of citronella is being replaced by such compounds as indalone, dimethylphthalate, and Rutzger's 612. A teaspoonful of one of these substances is spread on the palms and applied to the

Read before the Honolulu County Medical Society, November 17, 1944. Approved for publication. The opinions and views set forth in this article are those of the writer and are not to be considered as reflecting the policies of the War Department.

face, neck, hands, ankles, and parts of the body where the clothes fit tightly, such as the buttocks and shoulders. The repellent may be applied to clothing by means of sprayers, such as the hand sprayer or knapsack sprayer. Care must be taken to avoid the eyes and lips. Repellents are effective against mosquitoes for from two to four hours.

Perhaps the most spectacular advance in the battle against the disease producing mosquito, as well as other insects, has been the development of DDT[6]. DDT (dichloro-diphenyl-trichlorethane) is a whitish, light powder which has a tendency to agglomerate. It was discovered in 1874[7] but was allowed to lie dormant until 1939 when the Geigy Company of Switzerland found that it was an excellent insecticide against moths and bedbugs. Later, as an experiment it was tried against a plague of potato beetles and the results were very successful[7].

Dengue is a mosquito-borne disease which has produced a good deal of concern to both military and civilian physicians in this region. In addition to the classical symptoms of dengue, dental officers at forward bases have reported verbally that pericoronitis has not been uncommon in patients with dengue at those bases. This has begun as a gingivitis about the molar teeth and has spread to affect more of the gingiva. It has responded to local treatment such as that used for Vincent's stomatitis.

Since a vaccine for dengue is not available, control measures have been directed toward elimination of the Aedes mosquito. In Honolulu, this was accomplished by the use of teams of trained inspectors who canvassed each premise and treated or removed every breeding place possible. Special attention was paid to premises in which cases of dengue existed. In such instances adult mosquitoes, both indoors and out, were killed by spraying. In this connection a new means of applying insecticide, the aerosol bomb, has been developed. The bomb looks like a tin can, and by unscrewing a cap similar to that on an automobile tire tube, freon gas is released, and sends an "aerosol" of pyrethrum in sesame oil throughout a room in a few seconds.

SCRUB TYPHUS

The mite-borne diseases have been of military significance in this war, particularly in the south and west Pacific where scrub typhus* has been a cause of concern. This disease has an incubation period of ten to eighteen days, a sudden onset with headache, chilliness, and a step-like rise in temperature to 102 to 105 F. The temperature begins to subside by lysis in about three weeks. There may be bulbar conjunctivitis, apathy and delirium. A small necrotic ulcer or eschar may sometimes be seen at the former site of attachment of the infected mite. This primary lesion is, typically, 2 to 10 mm. in diameter, is surrounded by a pink areola, and is covered centrally with a black crust. The lesion is frequently present on admission and persists during the active period of illness. A rash appears on the fifth to the eighth day and is characterized by slightly raised, dull or raspberry red papules. The rash fades in a few days. At the end of the first week a tender, enlarged spleen may be detected. Central nervous symptoms are present and consist of confusion, convulsions, and delirium. Myocarditis may be present. Laboratory examination shows a normal leucocyte count or a leukopenia for the first week and a leucocytosis thereafter. The patient's serum contains agglutinins for Bacillus proteus O X K (Weil-Felix reaction), a rising titer being diagnostic. This is in contrast to murine typhus, in which the blood contains agglutinins for proteus O X 19. Rickettsiae may be recovered from the blood by injection into mice. There is a 2 to 10 per cent mortality from the disease, the mortality rising sharply after the age of forty. There is no specific treatment.

Scrub typhus is probably identical with tsutsugamushi disease, pseudotyphus of Sumatra, tropical typhus of the Federated Malay States, and coastal fever of North Queensland[9]. It is widely spread throughout the Asiatic Pacific Area extending from Japan down along Indo-China through the Federated Malay States into the Bismark archipelago[9]. The risk of infection appears to be greatest in camps located in kunai grass fields bordered by the jungle along water courses. In such areas conditions are favorable to the development and activity of mites. Since vaccines are ineffective against scrub typhus, the following measures for prevention have been used: (1) New camp sites have been completely cleared of vegetation, being preferably burned over prior to occupancy. (2) Sleeping on the ground is avoided. (3) The mosquito repellents mentioned in an earlier paragraph are used as they are effective against mites. The repellent is applied to the clothing as well as to the body. Dimethylypthalate and dibutylphthalate are most effective.

EPIDEMIC TYPHUS FEVER

Typhus vaccine, while not particularly effective against scrub typhus, has proved of value in the European theater as a means of protection for epidemic typhus[10]. Dusting with DDT has also been used with success in the control of epidemic typhus. During a large outbreak in Naples following allied occupation of that city the typhus control program consisted of case finding and immediate, large scale delousing[10]. Delousing was accomplished by applying DDT in dust or talc to the fully clothed person. The chemical was applied by means of a power duster, more than a million people being deloused in a short period of time by this method. Dusting was effective in the immediate control of the disease, the vaccine being given for long-term control.

BACILLARY DYSENTERY

In addition to mosquito and mite-borne diseases,

the fly-borne diseases have been of military importance. In the past, whole divisions have been immobilized by outbreaks of bacillary dysentery. In general, such outbreaks have been due to the presence of carriers in the Command and poor fly control. In the field, where it is necessary to use pit latrines, flies have come in contact with the infected stools of carriers and have mechanically carried the dysentery bacillus to food, where the organism has multiplied.

For controlling bacillary dysentery the Army has organized small laboratory teams having portable equipment. These teams can be flown to remote outposts on short notice whenever epidemics of bacillary dysentery occur. Stool examinations are performed on all patients and none are discharged until repeated cultures have been negative. In addition, stool cultures are made on the entire command so that carriers may be detected and isolated. To obtain specimens on a large scale, the rectal swab method is used. A rubber tube or speculum is inserted into the rectum and the applicator inserted through the tube. The culture medium is then inoculated with the specimen so obtained. It is possible to examine a great many individuals in a short period of time by this method.

Follow up examinations are made for several weeks to be certain that carriers have been sterilized for Shigella paradysenteriae. Sulfaguanidine is effective in the treatment of bacillary dysentery and thus serves as a preventive measure as well[11].

Respiratory Diseases

Certain lessons have been learned during the present conflict concerning the prevention and control of respiratory diseases. Among these are influenza, and meningitis, which is classified as a respiratory disease in the Army. Virus vaccine, types A and B, has been produced for the prophylaxis of influenza. The vaccine consists of a suspension of killed (formalinized) influenza virus, made from the growth of the virus in the allantoic fluid of the fertilized chick egg. The dose is a single 1 cc. injection given subcutaneously. While this vaccine has not yet been distributed on a wide scale, it should be available in the future. Experimental evidence indicates that it is effective in preventing influenza type A or B in about 75 per cent of cases.

The prophylactic use of sulfonamides, in the presence of an outbreak of meningitis, has prevented widespread epidemics. When two to four grams of sulfadiazine are given in a single dose to all members of an organization on a single day, the carrier prevalence remains low unless untreated personnel are introduced to the group.

Venereal Disease

Venereal disease, which in previous wars has produced a good deal of noneffectiveness, has been fairly well controlled in this war by many means. Perhaps one of the most important factors in the prevention of venereal disease has been the advent of penicillin and the sulfonamides for the treatment of syphilis and gonorrhea[12]. Through the use of these agents, it is possible to render patients noninfectious at an early date, thereby preventing further spread of the disease. The penicillin treatment of syphilis in the Army has a widespread application, being suitable for most stages of the disease.

Psychosomatic Medicine

A great many lessons have been learned in the field of neuropsychiatry in this conflict. The value of prophylactic psychiatry in raising the threshold of vulnerability to psychologic disorders cannot be overestimated[13]. The psychologic stability of soldiers is directly proportional to their factual knowledge of the situation in which they will serve. For the average individual the ravages of disease and war are exaggerated. Psychologic inoculation is the only effective preventive. Latent and imaginary dangers are naturally shocking on initial recognition and attendant anxiety can be dispelled only when men are given an understanding of the irrationality and emptiness of most of their fears. A patient, simple, repeated presentation of facts will in most instances assuage doubts and debunk groundless anticipation[13].

Neuropsychiatrists in the South West Pacific Area give the following causes for the psychiatric disorders occurring in that area[14]: separation from family, friends, loved objects and familiar surroundings; difficulty of selecting situations to which one can adapt; absence of the feeling of being wanted, appreciated or needed; a feeling that there is an Army ritualism which abhors error or a simple deviation more than it appreciates initiative or originality; a monotony of camp life; repeated bombing with near misses; feeling responsible in some way for a friend's death; being pinned down by the enemy for several hours; seeing others sacrificed on failing missions; and difficulties at home.

Industrial Hygiene

An industrial hygiene program in the Army is carried out under the direction of the Preventive Medicine Service in the Office of The Surgeon General[15]. The present war differs from former wars in that it is largely a war of mechanization. This has resulted in the necessity for Army-operated plants being moved to forward areas so that prompt repair of ordnance, automotive equipment, and other equipment may be made near the front. As a result many industrial hazards have developed which have had to be corrected. Occupational hazards are inherent in the manufacture and processing of materials which give off toxic fumes, dusts or gases. Other hazards may be due to environmental factors, such as poor lighting, excessive heat or inadequate ventilation.

Tetrachloroethane is a gas which is widely used in industrial processes in the Army and which in the past has created a hazard. The probable safe limit for eight hours exposure to this solvent is 10 parts per million. By comparison the probable safe limit for eight hours exposure to carbon monoxide is 100 parts per million. Special devices have been manufactured for safeguarding personnel against this gas.

Health hazards are found to exist from the use of industrial solvents such as kerosene and Stoddard's solvent. These may be inhaled or may be absorbed through the skin in sufficient amounts to cause intoxication. They may also defat the skin and cause dermatitis. Preventive measures consist of the use of protective gloves or a protective ointment such as lanolin.

Intoxication due to solvents may be acute or chronic. The symptoms may be related to the nervous system, gastro-intestinal tract, or blood. The chlorinated hydrocarbons, in general, may cause liver damage or aplastic anemia. Petroleum products have a narcotic effect. The prognosis in poisoning due to petroleum products is generally better than that with other products.

Devices to protect men from lead dust in paint spraying shops and from the inhalation of metal dust have included industrial masks and proper exhaust ventilation.

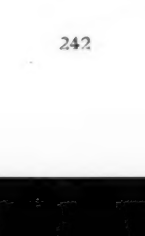
Though time does not permit of their elaboration, many advances in addition to those mentioned above have been made in preventive medicine.

CONCLUSION

In spite of the horrors of this greatest of all world wars, the medical lessons which have been learned offer a vista of hope for the future. The possibility of the introduction of new and bizarre diseases to the United States when our troops return constitutes a challenge to every physician. The romance of medicine, which disappeared somewhat with the passage of the horse and buggy doctor, has returned; for surely there can be no more thrilling call to the young physician than that offered by the opportunity of applying the principles of preventive medicine in the post war world. The need will be great, for problems will exist not only at home but also in those vast and dormant ancient countries which have been awakened from centuries of slumber by the clarion call of global war.

REFERENCES

1. Swanton, J. R.: Are Wars Inevitable, Smithsonian Institution, Washington, May 11, 1943, p. 1.
2. Garrison, F. H.: An Introduction to the History of Medicine, ed. 3, Philadelphia, W. B. Saunders Co., 1924, p. 109.
3. Ibid, p. 235.
4. Ibid., p. 235.
5. Johnson, L. W.: Not This Time—We Hope, Pacific Fleet Med. News, 1:1 (Nov.) 1944.
6. Editorial: Jour. Royal Army Med. Corps 83:34 (July) 1944.
7. Ibid.
8. Lipman, B. L.; Byron, R. A., and Casey, A. V.: Clinical Survey of Scrub Typhus Fever, Bull. U. S. Army Med. Dept. 72:63 (Jan.) 1944.
9. Report of Team of U. S. of America Typhus Commission, Bull. U. S. Army Med. Dept. 76:52 (May) 1944.
10. Typhus Fever in Civilians in Italy, Bull. U. S. Army Med. Dept. 76:13 (May) 1944.
11. Page, S. G., Jr.: Sulfaguanidine in the Treatment of Bacillary Dysentery, Bull. U. S. Army Med. Dept. 72:50 (Jan.) 1944.
12. Dawson, M. H., and Hobby, G. L.: The Clinical Use of Penicillin, J.A.M.A. 124:619 (March 4) 1944.
13. Rome, H. P., and Fogel, R. H.: The Psychosomatic Manifestations of Filariasis, J.A.M.A. 123:944 (Dec. 11) 1943.
14. Bull. U. S. Army Med. Dept. 69.11 (Oct.) 1943.
15. Army Industrial Medicine, Bull. U. S. Army Med. Dept. 75:10 (April) 1944.



Clinical Advances in Medical Problems Occasioned by World War II

COMMANDER ALBERT WORTH HOBBY, M.C.-V.(S), U.S.N.R.

The treatment of patients in mass numbers offers the physician an opportunity to observe and improve the results of his treatment. War conditions have given us this opportunity, and the medical profession has greatly benefited by it, as evidenced by the fact that the annual death rate per 1000 for all diseases excluding surgical conditions has been reduced from 15.6 in World War I to 0.6 in World War II.

To enumerate a few of the outstanding diseases we find that:

	PER CENT FATALITY	
	WORLD WAR I	WORLD WAR II
Meningitis	58	4.0
Pneumonia	28	0.7
Tuberculosis	17.3	1.8
Dysentery	1.6	0.05

For an over all picture we may say that there is a reduction in the death rate greater than 95 per cent.

What has made this reduction possible? The answer is manifold, but a few of the reasons are: (1) the placing of the physician so that he can do that type of internal medicine for which he is best trained; (2) the personal interest that the physician shows in each individual case; (3) the advent of new drugs such as penicillin; (4) improved technique in the use of well known drugs; and (5) better control and hospitalization of the patient.

MENINGITIS

Some of the reduction in the mortality of meningitis is due to the use of sulfadiazine and penicillin. Until recently nearly all the cases presenting the Waterhouse-Fridrichsen syndrome were fatal. With the present administration of penicillin intrathecally and intravenously as soon as the patient is admitted to the hospital, the mortality rate and the development of complications has been greatly reduced. The physician attending large concentrations of men should always be meningitis-minded in order to pick up these cases early.

PNEUMONIA

In one of the large naval hospitals a recent survey showed that only two deaths occurred from pneumonia in a twenty-seven-month period. This again demonstrates the improved method of handling this disease through the use of sulfadiazine and penicillin. Ten years ago a survey was made in a large civilian charity hospital and it was found that each pneumonia case was receiving 72 doses of medicine in each twenty-four hours. With the present simplified form of treatment the patient obtains much needed rest as well as proper medication.

Atypical pneumonia first appeared in 1937 with the reporting of two cases, or .02 per 1000 personnel, and increased so rapidly that the rate was .95 per 1000 in 1941 and 2.79 per 1000 in 1942. Last year proved that it is still on the increase and in the future may have serious consequences, especially since we have as yet no satisfactory method of treatment. It has already surpassed lobar pneumonia and equaled broncho-pneumonia in its incidence, and is far more contagious than either of them. The classification and treatment of atypical pneumonia is still unsatisfactory. It is known that the action of penicillin in fowl and animals in experimental work is not exactly the same as that in humans. However, it has been used with some striking results in some cases of atypical pneumonia, just as sulfonamides have terminated some cases dramatically. One or both should be given at the start of each case. Results will depend on what is the causative agent. There must be various etiological agents, because of the behavior of the disease. Most of the deaths occurring from atypical pneumonia are caused by secondary invaders. On admission to the hospital all pneumonia patients in addition to a complete history and physical examination should have the following laboratory work: (1) urinalysis; (2) erythrocyte sedimentation rate; (3) complete blood count; (4) sputum typing; (5) sputum smear for predominating organisms; (6) sputum culture; (7) x-ray (14 by 17 inches) of the lungs; and (8) if the patient is acutely ill a blood culture should be included. Immediately after this is done all cases of pneumonia should be placed on a regimen consisting of sulfadiazine, 4 gm. immediately and 1 gm. every four hours thereafter by mouth, to be given with sodium bicarbonate; sedation as needed to prevent reaction to sulfonamide and to insure rest; a moderate amount of fluids (2,500 cc. as a minimum per day); a laxative or enema as necessary to insure daily bowel movements; an oxygen tent when necessary, and absolute rest in bed.

In bronchopneumonia and lobar pneumonia the sulfadiazine is continued until a normal temperature has been maintained for two days. At this time it is reduced to 1 gm. three times daily for two days

Read before the Honolulu County Medical Society, November 17, 1944. Approved for publication. The opinions and views set forth in this article are those of the writer and are not to be considered as reflecting the policies of the Navy Department.

and then discontinued. It has been found that in some cases the temperature almost but not quite reaches normal and in such cases, if two of the 1 gm. doses each twenty-four hours are increased to 2 gm., then the temperature usually returns to normal and remains so. This increases the sulfadiazine level to 7 to 10 mg. per hundred cc. of blood. The sulfonamide concentration in the blood of 3 gm. per hundred cc. recommended by many has not been found as effective as the higher levels. Sulfonamide reactions are often due to lack of sufficient fluid intake. When nausea or mental symptoms contraindicate oral medication, 5 gm. of sulfadiazine should be given intravenously followed by 2 gm. intravenously every six hours until oral therapy can be started.

Whenever sulfonamides are indicated but fail to produce the desired results or cannot be given for other reason, penicillin may be used. Penicillin has produced excellent results. The total dosage used is 200,000 to 400,000 units over a period of five to six days. Intramuscular injections of 5,000 to 10,000 units are given every three hours day and night, following an initial intravenous dosage of 20,000 units. The method of administration must be suited to the individual patient. The site of injections often becomes very painful, especially when there is a slight discoloration of the penicillin fluid. Reactions are very rare, the most frequent being a mild rash about fourteen days after the drug is stopped.

The use of blood plasma brings about dramatic changes in the acutely ill. The exact chemistry of plasma is not understood. There are several plausible theories but space does not permit their discussion here. Three units of 250 cc. each, given on two successive days at the proper stage, causes dramatic improvement in all aspects of the disease.

When anemia is present, 500 cc. of whole blood is also administered following the plasma. Its use for acutely ill patients is strongly urged.

A word regarding the use of the two above mentioned drugs is deemed advisable. There is no contraindication to using them together if desired. The indiscriminate use of the sulfonamides is not good medicine. Each case should be carefully selected before using these drugs. Their toxic effects can be fatal. Likewise it is believed that their indiscriminate use lessens their effectiveness in the individual during subsequent illnesses. Penicillin is much less toxic but an intimate knowledge of both drugs is needed to obtain the best results.

TUBERCULOSIS

Tuberculosis, which the general population used to consider a disease to be ashamed of and hidden, has now been brought out where it can be stamped out to the same extent that smallpox has been. All that is needed is to make the public tuberculosis-minded. Educate the public and they will enact isolation laws that will rid the country of this menace. The armed forces have undertaken a program of x-raying the lungs of every man once a year and also screening out suspected cases prior to entrance into military service. In this way many cases are found, and treatment advised. There is one deplorable fact that should be mentioned. The average stay in the hospital of cases of tuberculosis admitted to the Veteran's Administration is less than sixty days. This does not permit cure of the case. But advancement is being made and the future is much brighter for the control of tuberculosis. The advent of the 35 mm. film of the lungs, costing one cent as compared to 78 cents for the old 14- by 17-inch film, is a great help and is adequate for picking up suspected cases.

MALARIA

This war has directed our attention to malaria. The present trend is to omit all drugs in treatment of malaria except atabrine. Quinine is used only in rare selected cases and for intravenous use. The standard now used is atabrine, 1 gm. during the first twenty-four hours followed by .3 gm. per day for six days, totalling 2.8 gm. At this time the patient is able to return to his activities and should continue on 0.1 gm. per day while in a malaria infected zone.

Vivax malaria will have repeated relapses regardless of the type of treatment. Falciparum or malignant malaria can be cured by the above routine if the patient continues the suppressive treatment for two months after leaving the malaria zone. Much research work is being carried out now on improving the treatment and prevention of relapses in the vivax form but the results are not available at this time.

FILARIASIS

Many of the military forces returning from the tropics have directed our attention to filariasis. This is a self-limited disease if the patient is placed where he is not reinfected. They convalesce best in cool climates. No case of sterility due to it has been reported, to my knowledge. At present there is no basis for fear that the country is going to be flooded by a number of tropical diseases.

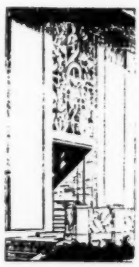
PSYCHOSOMATIC PROBLEMS

This war has taught us the vast need for rehabilitation. Our potentially neuropsychiatric patients need attention before conditions produce disability. Likewise our attention is directed to the further effects of strain during wartime by the marked increase of certain heart conditions especially in those over 35 years of age. Still another manifestation is the frequent occurrence of peptic ulcers. We should learn to treat the patient rather than the ulcer, thereby obtaining better results. The old Sippy method of treatment is now obsolete. The use of soft diet, aluminum hydroxide and antispasmodics, with rest and relief from tension and worries, is a far superior method.

EPIDEMIC TYPHUS FEVER

Another new development is the treatment of louse borne typhus fever by the use of para-aminobenzoic acid. Four to 8 gm. are given as the initial dose, followed by 2 gm. every two hours unless the blood level attains excessive values. Adjustments in dosage are made in relation to fluid intake and urinary output. Intake of fluid should be adequate to produce an output of 1500 to 3000 cc. in each twenty-four hours. Best results are obtained with a para-aminobenzoic acid blood level between 10 and 20 mgm. per hundred cc. Sodium bicarbonate is given in sufficient quantity to keep the urine neutral and thereby prevent gastric irritation, nausea and vomiting. Both drugs should be continued until temperature has remained normal for twenty-four hours. Only a small number of cases thus treated have been reported, but it appears that the number of hospital days and the mortality rate have been markedly reduced.

There are many other lessons learned in this war but I would like to mention in closing that if the new research work in penicillin continues to advance, soon we will find that many seropositive individuals do not have syphilis. We will have a new and far better test for the determination of the presence of syphilis and for the treatment of many skin diseases.



Some Practical Facts About Parenteral Dextrose Therapy

THE FUNCTION OF THE BODY DEPENDS ON THE FUNCTION OF ITS CELLS

NO CELL CAN FUNCTION WITHOUT ENERGY

DEXTROSE IS AN EXCELLENT SOURCE OF ENERGY

ENERGY IS DERIVED FROM DEXTROSE VIA ENZYME SYSTEMS

CERTAIN B VITAMINS ARE CONSTITUENTS OF THESE SYSTEMS

CARBOHYDRATE BY MOUTH OR VEIN TENDS TO DEPLETE THE B CONSTITUENTS

THE B CONSTITUENTS ARE EXPENDABLE; THEY MUST BE REPLACED

THE THERAPEUTIC IMPORTANCE OF SUCH REPLACEMENT HAS BEEN EMPHASIZED BY TOP-NOTCH CLINICIANS, SUCH AS SPIES, SYDENSTRICKER, JOLLIFFE AND POLLACK

TREATMENT OF ONE DISORDER SHOULD NOT CREATE ANOTHER

FOR PROTECTED, PARENTERAL DEXTROSE THERAPY USE—

TRINIDEX

A Sterile, Pyrogen-Free Solution of

5% DEXTROSE IN NORMAL SALINE

Fortified with

NICOTINAMIDE, RIBOFLAVIN AND THIAMINE HYDROCHLORIDE

Ready To Use

In 1000 cc. Light-Protected

BAXTER VACOLITER

DON BAXTER, INC.

RESEARCH AND PRODUCTION LABORATORIES

1015 GRANDVIEW AVENUE

GLENDALE, CALIFORNIA

FOR YOUR CONVENIENCE AVAILABLE AT . . .

THEO. H. DAVIES & CO., HILO · KAHULUI STORE, MAUI

CROCKETT SALES COMPANY

P. O. BOX 3017 • PHONE 87490

HONOLULU, HAWAII

HAWAII MEDICAL JOURNAL

Editorial Advisory Board	Editor	Associate Editors
ERIC A. FENNEL, M.D.	HARRY L. ARNOLD, JR., M.D.	H. M. PATTERSON, M.D. Hawaii
JAMES R. ENRIGHT, M.D.	Editorial Director LYLE G. PHILLIPS, M.D.	WILLIAM B. PATTERSON, M.D. Maui
F. L. PLEADWELL, M.D.	Managing Editor EDITH C. BENNETT	SAMUEL R. WALLIS, M.D. Kauai

EDITORIALS

THE RELATIONSHIP BETWEEN THE PRIVATE PHYSICIAN AND THE HEALTH DEPARTMENT*

The work of every subdivision of the Territorial Board of Health directly affects the practicing physicians of this community. It would be more difficult for physicians to practice modern medicine in an effective way without the aid of a well organized and effective health department. On the other hand, all of us who are carrying out the activities of the health program of the Territory of Hawaii recognize that we too would not carry on as satisfactorily, either, without the cooperation, understanding, and wholehearted support of the medical profession. The dependence of one on the other is mutual, and our successes are contingent upon mutual understanding and confidence. The fundamental purposes of both the physician and the health department are the same. Both are striving for better health in the community.

When a physician is licensed to practice medicine, there are certain obligations and functions which he assumes, such as the reporting of births, deaths and preventable-disease statistics. He is expected by the public to know something about public health and hospitalization facilities, and a great deal about medical care. He becomes primarily involved in and responsible for the medical care of individuals. The health officer, on the other hand, must not only be experienced or trained in all aspects of public health work, but also must keep up with the development of modern methods of medical care and hospitalization. He must also become a student of government. He applies from time to time developments in modern medicine and public health in the promotion of new programs for the benefit of the whole community.

However, there are certain areas in medical care and public health in which private physicians have not been able to provide complete and adequate individual medical care; for example, tuberculosis, leprosy, venereal disease, crippled children and mental diseases. It is my belief that the health department should do as little clinical and curative work as is possible and compatible with the protection of the general health of the community. It is necessary at times to undertake certain of these services because of immediate necessity. But the health department should, and it will, allocate these activities to the practicing physician as fast as the medical profession will accept full responsibility for them. When there are a sufficient number of qualified practicing physicians who are available and are interested in providing all the preventive and curative services necessary for the protection of community health, then the health department should relinquish such activities to the practicing physician and limit its services primarily to health education activities. Practicing physicians must, however, in order to make this effective, become familiar with the more useful public health methods and techniques that may be utilized in the prevention of disease and the promotion of health. In medical teaching, at least as much emphasis should be placed on aspects of preventive medicine as upon curative medicine.

It is my observation that physicians of this community have been too busy with their private practices to offer much time to, or take much interest in, certain clinic services needed for a comprehensive and modern public health program. This has been particulalry true in the past ten years. In the postwar period, when we will have more physicians available, clinic activities of the health department should be staffed by members of the local medical society.

With the present trend in public thinking and legislative action toward public health, hospital and medical care programs, the health department and the organized medical societies of the Territory must work hand in hand in providing the leadership nec-

* This paper was presented by Dr. Richard K. C. Lee, Director of Public Health, at the March 2, 1945 meeting of the Honolulu County Medical Society along with other speakers from the health department.

essary so that these measures will be kept in proper balance with the needs of the community. Health department personnel are constantly asked by the public and by government officials for advice on these subjects. The organized medical profession should also, I believe, through their proper representatives, be available to these same individuals for consultation, and be able to give constructive recommendations. We should, as much as possible, present a united front on these subjects.

This health department is your department. You are represented by physicians on the staff, on the Board and on your medical advisory committees. We try to aid you individually and collectively. Naturally, we want your cooperation and approval. We do not consider ourselves as your competitors in the field of medical care. I believe we do consider ourselves as your interpreters to the public and government on the whole subject of public health and medical care —having in mind always the interest of the community as well as the aims and objectives of organized medicine. We, of course, value constructive criticism and suggestions from you on any problem relating to public health and medical care. While you are striving for better health and happiness for your patients, we are striving for better public health, and as a result, greater contentment and security for the whole community.

TO THE EDITOR:

I was glad to see your editorial on Weil's Disease in the November-December issue of the HAWAII MEDICAL JOURNAL. The more attention this disease gets the sooner it will be recognized and steps taken to control it. The problem continues the same here. I have seen 16 cases since I published my paper on this disease last year.

There is an impression left by your editorial that Dr. Alicata and I are in disagreement as to the incidence of Weil's Disease in rainy and dry areas. I admit that this interpretation of Dr. Alicata's and my papers could be made but when considered together there is really little, if any disagreement. Dr. Alicata's table on page 16 of *Plantation Health*, v.8, No. 4, Oct. 1944, shows the percentage of positive Weil's agglutination reactions in random workers from various districts of the island and as the incidence of positive reactors curves upward so does the rainfall in inches with the exception of the Hamakua District. Dr. Alicata is right in concluding that there are more positive reactors in the rainy areas and certainly there is no fundamental disagreement since most of the clinical cases have been reported from the most rainy areas. In my paper in the HAWAII MEDICAL JOURNAL of May-June 1944 in discussing rainfall I made the statement "In general it is wet in all parts of the district most of the time." I think this is the answer. This is a wet district. I broke my figures down into the four principal villages of the district and this breakdown showed that within the district the number of cases did not follow the rainfall curves but again I emphasize all of these villages are relatively wet most of the time. If you look at table 2 in my paper you will see that in the driest village there were 330.14 inches of rain in 27 months. This is wet in any language. I think a generally wet area increases the chance of getting this disease but I feel that within a wet area there are other factors, some as yet unknown, which determine if an individual is to get the disease. It may be that there is an optimum rainfall for the Leptospira to flourish in. If this rainfall is greatly increased the Leptospira may be washed away from places of contact or it is certainly probable that in extremely wet weather the worker may not turn out for work and make the required contact.

I would appreciate your making some comment upon this or if you like you can use this letter. I do not feel that the impression should be left that Dr. Alicata and I are on opposite sides of the fence on this point.

H. M. PATTERSON, M.D.

Feb. 21, 1945.

LEPROSY AS SEEN AT CARVILLE

Hopkins, of Tulane, and Faget, of Carville, recently reviewed[1] 723 cases of leprosy seen at the National Leprosarium. Some of their observations were of particular interest.

As to the birthplace of their cases, 303 were foreign born; of these nearly half were from Mexico, a sixth from the Philippines, and the remainder widely scattered. Eight in this list were from Hawaii. Of 420 native born patients, 301 were born in Louisiana and Texas, 34 in Florida, and 23 in California; no other state had more than 8. In the list of states from which patients were admitted, the list was led by Louisiana (173), Texas (183), California (132), New York (79), and Florida (49).

Racial ancestry of patients in over half the cases was either Mexican (212) or native-born American (179). Of the latter group, only 52 were Negroes, a surprisingly small number. The prevalence of the disease among the immigrant French-Canadian Acadians and their descendants is discussed at some length.

The disease was of less than two years' duration at the time of admission in 249 cases, and of less than five years' duration in 476. The average interval from onset to admission was approximately five years —an ominous figure from the standpoint of prevention of spread, and one which can undoubtedly be laid in many instances to failure of physicians to suspect, or to know how to diagnose, the disease.

The ratio of male to female patients was more than two to one—definitely higher than in Hawaii, where it is about three to two[2]. It is interesting that among

[1] Hopkins, R., and Faget, G. H.: Recent Trends of Leprosy in the United States, reprinted, with additions, from J.A.M.A. 126:937 (Dec. 9) 1944.

[2] Sloan, N. R.: Early Diagnosis of Leprosy as Seen in Hawaii, HAWAII MED. J. 3:111 (Jan.-Feb.) 1944.

Negro patients, women outnumbered men, as is also the case in Africa.

In their series there were 537 lepromatous cases, three-fifths of which were listed as mixed (i.e., showing "severe" nerve damage[3]) and only 186 "neural" cases, of which 31 (all seen during the past six years) were listed separately as tuberculoid cases. This gives a ratio of about three lepromatous cases to one neural case. This ratio prior to 1928 was eight to one! The authors suggest, quite properly, that the reduction of this ratio probobly indicates an increase in diagnostic acumen on the part of physicians seeing these cases.

No known contact with the disease was claimed by 560 cases. Contact with a friend or neighbor had occured in 16 cases, and family contact was admitted in 147. Of these only 16 patients named a husband or wife as a contact, and in 14 of these the disease existed in both persons prior to marriage. In other words, a spouse was known to be a *possible* source in only 2 instances! This same rarity of marital transmission has been noted in Hawaii[4].

The initial symptoms noted by the patients corresponded precisely with those noted in Hawaii by Norman Sloan[2], the field being led by macules, nodules, numbness, and swelling of the skin; "ulcers" were far more commonly noted in Hawaii than in the Carville series, perhaps because of the prevalent practice of going barefoot here.

Positive serologic tests for syphilis, so common in leprosy, were noted in slightly over half the cases of lepromatous leprosy, whether there was associated "marked" nerve damage or not, and in only about one-sixth of the cases of neural leprosy, whether of tuberculoid type or not. The sharp disparity between the incidence of positive reactions in the "mixed" and lepromatous cases on the one hand, and the "neural" and tuberculoid cases on the other, seems an additional reason for not making the artificial separation between "mixed" and lepromatous, and between "neural" and tuberculoid.

The same point is made again by the figures on duration of the disease: "mixed" and lepromatous cases lived an average of 10.6 and 9.3 years, respectively, after the onset; neural cases averaged 14.5 years, and one tuberculoid case died 18 years after the onset of the illness.

Still a third piece of evidence comes up in the next section, entitled Disposition of Patients, to support the same point. Of the "mixed" cases, 6 per cent were discharged as arrested; and of the lepromatous cases, 7 per cent. This outcome was achieved, however, in 59 per cent of the "neural" cases and 65 per cent of the tuberculoid cases. What more telling evidence could be desired, than this identity of prognosis—poor in lepromatous and "mixed", good in "neural" and tuberculoid? Surely this is the very proof of the pudding itself. As to readmissions because of relapse, the same story is told all over again: one-fifth of the discharged "mixed" and lepromatous cases were so returned, and one-fourteenth of the discharged "neural" cases had such an outcome. No tuberculoid case relapsed.

Most cases died of tuberculosis or nephritis, as is true in other parts of the world. In Hawaii, death from renal failure has regularly been found at autopsy to be associated with amyloid deposition in the glomerular tufts, a very different picture from ordinary glomerulonephritis[5]. It is odd that in this large series of autopsies no mention was made of amyloidosis. One wonders whether it was merely overlooked, or actually did not occur.

From the foregoing material it seems apparent that if we in Hawaii can by virtue of the clinical appearance of patients, coupled with bacteriologic study and properly prepared biopsy material, differentiate between, on the one hand, *lepromatous* leprosy (including "mixed" leprosy) and, on the other hand, *"neural"* leprosy (including tuberculoid leprosy), we will be on a much firmer ground in our constructive program of declaring as "arrested" every possible case, with a minimum of relapses.

[3] Faget, G. H.: Personal communication.

[4] Sloan, N. R.: Personal communication.

[5] Tilden, I. L.: Personal communication.

TO THE EDITOR:

We have just been advised by the Certified Blood Donors Service of Jamaica, New York, that Dr. Weiner has modified the technic of the Rh typing test. Will you please give this change publicity in the HAWAII MEDICAL JOURNAL. The new technic is:

Mix one drop of the anti-Rh serum with one drop of cells of a 2 per cent fresh red blood cell suspension in a culture tube 3″x⅜″. All suspensions should be made from fresh blood and should be washed clear of any hemolysis. The tube is then placed in the water bath at 37 degrees Centigrade and left for one hour. It is then centrifuged for one minute at 500 r.p.m. and the agglutination observed. The tube is then tapped very gently. The result is then read macroscopically for clumping. Where clumping is evident the result is Rh positive. Those that seem to be negative macroscopically are then examined under the microscope (low power). Those that show no clumping and the red cells evenly distributed are definitely Rh negative.

The serum which the Blood Bank uses is that known as Anti-Rh Standard or Anti-Rh₀. We always run known positive and negative controls with each test.

F. J. PINKERTON, M. D., *Director.*

Honolulu Peacetime
Blood Plasma Bank

March 15, 1945

BOOK REVIEW

Marihuana Problem: by the Mayor's committee on marihuana. James Cattell Press.

This book might well serve as a model for an investigation of a similar problem by any group in the future. It exemplifies beautifully that such a study, if properly and thoroughly planned in advance and carried out according to plan, becomes infinitely more understandable and useful to persons to whom the problem is potentially interesting, than is a series of haphazard investigations.

Most of us, even physicians, have obtained our ideas about the prevalence and importance of marihuana addiction by reading newspapers and magazine articles on the subject. One becomes absolutely certain, after reading the book, that these articles have not been based on fact but almost entirely on fancy. It is also evident that insofar as the City of New York is concerned, at least—and this group is certainly large enough to be statistically important—the use of marihuana poses a less serious problem than does the use of alcohol. Indeed, addicts studied after years of addiction showed no indication of deterioration of any sort. There is no tendency to increased dosage. Tolerance does not increase. The users themselves are definitely afraid of overdose and carefully abstain from taking more than the usual dose. They even employ antidotes against the effect of a somewhat larger dose than usual.

No matter what phase of the subject of marihuana any physician or psychiatrist may be interested in, he should be able to find the answer in this excellent little volume.

H. L. ARNOLD, M.D.

PROGRESSIVE MUSCULAR DYSTROPHY: AN AVITAMINOSIS?

A recent preliminary report by Milhorat and Bartels, of Cornell University Medical College[1], suggests that defective utilization of tocopherol may be the basis for the syndrome of progressive muscular dystrophy. The defect appears to consist in these patients' inability to condense ingested tocopherol with inositol in the gastrointestinal tract, with the resultant formation of a tocopherol-inositol ether.

The complexity of the intrinsic defect is indicated by the fact that no clinical improvement, or decrease in creatinuria, could be produced by feeding either tocopherol or inositol separately. Prompt diminution of creatinuria was produced in five of seven cases, however, by feeding the substances together in equimolecular amounts. The preformed condensation product was from eight to thirty times as effective as corresponding amounts of the separate substances, and this effectiveness was further increased by incubation with extract of hog stomach and duodenum. Similar incubation of tocopherol alone was ineffective except in a single mild case.

[1] Milhorat, A. T., and Bartels, W. E.: The Defect in Utilization of Tocopherol in Progressive Muscular Dystrophy, Science 101:93 (Jan. 26) 1945.

COUNTY SOCIETY REPORTS

HONOLULU COUNTY MEDICAL SOCIETY

The regular membership meeting was held on February 2, 1945 in the Mabel Smyth Auditorium. Dr. Halford presided. About fifty members were present.

Three papers were presented: "Mammaplasty for Hypertrophic Breast" by Dr. Clarence E. Fronk, "Demonstration of Cardiac Murmurs" by Dr. Alfred S. Hartwell, and "Relation of Workmen's Compensation to the Employee and Physician" by Mr. William M. Douglas of the Territorial Workmen's Compensation Bureau. A discussion of disability ratings followed.

Dr. Halford announced that Mr. Carter of the Hawaii Medical Service Association was on the mainland studying hospital plans there. Dr. Pinkerton reported that a committee had been appointed, consisting of Drs. Winter, Benyas, and Pinkerton, to study the new industrial fee schedule for adjustment of the H.M.S.A. schedule. He also reported that it had been suggested that the schedule of the Medical Society be used as the "C" bracket and that the other brackets be adjusted up or down; however, no action had been taken. He announced that the H.M.S.A. had built up a reserve of $86,000.00.

Dr. Halford asked Dr. Winter to discuss the matter of physical examinations. Dr. Winter suggested that the Medical Society request the signatures of any doctors who desire to give physical examinations, in order that the Secretary might recommend these physicians to firms requesting such work.

Dr. Halford reported that Dr. Kepner had presented to the Board of Governors three model laws regarding (1) repeater, (2) juvenile delinquent, and (3) expert testimony. He also asked the members to study the matter of adoption of babies in the Territory.

M. GORDON, M.D.,
Recording Secretary.

KAUAI COUNTY MEDICAL SOCIETY

The regular meeting of the Kauai County Medical Society was held on February 14, 1945, at the Wilcox Hospital at 7:00 P.M. Members present were Doctors Chisholm, Liu, Kuhns, Chang, Harris, Umaki, Hata, and Wallis. Dr. Matsunaga, not yet a member of the Society, was also present.

The minutes of the previous meeting were also read and approved.

Dr. Wallis read a letter from Dr. Fennel, President of the Territorial Association, informing him that he had been appointed to the advisory committee of the Bureau of Maternal and Child Health and that Dr. Y. P. Chang had been appointed as alternate.

Dr. Wallis read a letter from the Hawaiian Canneries Co. stating that employees seeking medical services from physicians other than the company physician cannot expect the company to pay for such services unless the company physician has been notified in advance of the arrangements.

It was moved by Dr. Wallis that the Secretary write to Dr. Wilbar and obtain a statement as to which patients are to receive free medical service and which may be charged a fee by physicians visiting Kauai under the authority of the Board of Health. Seconded by Dr. Chang. Passed.

It was moved by Dr. Wallis that the Society have a bulletin board placed in the resident's office of the Wilcox Hospital, the board to be used for the posting of information of interest to the physicians. Seconded by Dr. Hata. Passed.

As per the requirements of the Constitution and By-Laws of the Society the Board of Censors presented the following slate of nominations for officers of the Society for the year 1945–1946:

President	Dr. Umaki
Vice President	Dr. Hata
Secretary Treasurer	Dr. Harris
Delegate	Dr. Boyden
Alternate Delegate	Dr. Kuhns
Censors	Drs. Chang and Chisholm

The Secretary read a letter from Dr. Brennecke stating that he had been asked by Mrs. Plews for a statement from the Society as to the quantity of surgical dressings which should be kept on hand by the Red Cross for emergency use. It was the general opinion that a quantity sufficient to take care of 10 per cent of the population would be enough.

There being no further business, the meeting adjourned.

DAVID LIU, M.D.,
Secretary.

HAWAII COUNTY MEDICAL SOCIETY

The 235th meeting was held at the Hilo Yacht Club Thursday evening, February 1, 1945 at 6:30 P.M. This was a dinner meeting with Dr. Fennel, president of the Territorial Medical Association, as guest. Following the dinner, the meeting was called to order in the lanai of the Yacht Club by the president, Dr. M. H. Chang.

Reading of the previous minutes was dispensed with and Dr. E. A. Fennel was given the chair. He gave a very interesting report on some of the activities of the Territorial Medical Association touching chiefly on conditions as they exist in other Islands: relationship between the Board of Health and medical societies; law to change one year residency; Dr. Kepner's work on the bills regarding juvenile delinquency and expert testimony; premarital tests for syphilis; laboratory technicians; E.M.I.C. program; fee schedule; possibility of having a president-elect of the Territorial Medical Association; and extension of the Hawaii Medical Service plan to other islands.

Dr. Orenstein reported that the physicians connected with the Hilo Memorial Hospital had agreed that the Board of Directors of the Hilo Memorial Hospital should be composed entirely of lay people and that this recommendation had been passed on to the representatives of this Island who are attending the next Legislature. He felt that this information was important for Dr. Fennel to know so that he could inform others in Honolulu regarding this matter. Following this, Dr. Fennel informally discussed laboratory procedures.

As there was urgent business to be attended to, the meeting was called to order for business at 9:30 P.M. Dr. Leslie urged that all 1944 journals be returned to the Library so that they could be bound.

A letter from Dr. Wilbar regarding the resignation of Dr. L. L. Sexton as Government Physician and Registrar of South South Hilo District was read. Dr. L. L. Sexton, who has been Government Physician since 1909, stated that in 1910 the salary was adequate to take care of the work; however, as time has gone on and traveling from different parts of the Island has been made much easier and as the city has grown considerably, the work has increased far beyond the salary. It was recommended and moved by Dr. Orenstein that the Hawaii County Medical Association keep on record, as recommended to Dr. Wilbar, that the Registrar's activities of the District of South South Hilo be turned over to the Board of Health. Dr. Loo seconded this motion and it was passed unanimously.

Considerable discussion followed concerning the position of Government Physician. Dr. C. L. Phillips made a motion for the President to appoint a committee of three Hilo doctors to look into the matter of the position of Government Physician and let Dr. Wilbar know as soon as possible. This was seconded by Dr. Chang and passed unanimously. As Dr. Sexton was very anxious to be relieved of his duties, Dr. A. T. Roll stated that he would be very glad to take over these duties until such a time as a permanent appointment might be made. It was recommended that any other member of this Society living in Hilo who was interested in this position contact Dr. Wilbar immediately.

Meeting was adjourned at 10:45 P.M.

The 236th meeting of the Hawaii County Medical Society was the annual meeting which was held at the Country Club on March 3, 1945, at 6:30 P.M. Dr. M. H. Chang, president, was the host at the dinner.

The meeting was called to order at 8:10 P.M. It was moved by Dr. Orenstein that the minutes of the previous meeting be dispensed with.

Dr. Leslie gave the treasurer's report which was accepted. Dr. Phillips reported on his work as chairman of the committee to work into the matter of Government Physician for South South Hilo. The plan at present is to wait and see what happens in this year's Legislature. Dr. Wilbar is trying to arrange it so that each physician will be able to take care of indigents and present his bill to the County. Dr. Leo Bernstein has been appointed in charge of Vital Statistics. Dr. Wilbar requested Dr. Sexton to carry on with the position as Government Physician a little longer until the Legislature reaches a decision.

Dr. Wm. Leslie reported on the tuberculosis committee. Dr. Phillips suggested that we let our legislative committee study this report in more detail.

Dr. Patterson offered the suggestion that the President and the legislative committee, together with other officers of the Society, meet before each meeting to present facts and discuss them so as to get our business meeting over quickly and have more time for scientific studies. Dr. Leslie reported on the work of the library committee for the year. Dr. Phillips moved that this report be accepted. Dr. M. H. Chang wondered if accepting this report meant that we had to conform with all recommendations. It was decided that accepting the report meant only further studying of the recommendations by the new committee. Dr. Crawford offered his opinion that the Hilo Memorial Hospital should do more for the library. Dr. Leslie stated that Mr. Hanner of the Hilo Memorial Hospital was in agreement with this suggestion but that it was up to the Legislature to decide. Motion was seconded by Dr. Chang and unanimously passed.

Dr. Eklund gave a report on his communication with the Inter Island Airways regarding the transportation of sick people to and from Honolulu.

Dr. Leslie reported for the fee schedule committee and presented a tabulation showing the different changes among different doctors on this Island giving at the same time, the low, high and average charges for certain operations and sicknesses. Election of officers took place following this. The following officers were elected unanimously.:

President.....Dr. R. T. Eklund
Vice President.....Dr. Wm. F. Leslie
Secretary.....Dr. S. Mizuire
Treasurer.....Dr. H. B. Yuen
Board of Censors.....Dr. G. Tomoguchi (added to list)
Delegates.....Dr. Archie Orenstein and Dr. H. M. Patterson
Alternate Delegates:
Dr. H. E. Crawford and Dr. G. Tomoguchi

Letter was read from the Junior Chamber of Commerce requesting the endorsement of this Society for Cancer Month, which will be held for the purpose of raising funds to help continue the study on research work in cancer. It was unanimously passed that this Society go on record as approving Cancer Month.

Meeting was adjourned and Dr. Yuen, chairman of the entertainment committee, started off the evening with several games. Prizes donated by local merchants were offered.

R. T. EKLUND, M.D.,
Secretary

MAUI COUNTY MEDICAL SOCIETY

The Annual Meeting of the Maui County Medical Society was held at the Jodo Mission in Wailuku on January 30, 1945.

The following members were present: T. P. and E. L. Chou, Osmers, Kushi, Tompkins, Sanders, Balfour, Kanda, K. Izumi, Patterson and von Asch. Guests were Drs. Cloward, Stitt and Florine.

Dr. John Sanders gave a report of the Annual Dinner Party. The committee has arranged for the party to be held on February 17, at the Country Club. It was decided that the dinner should be a closed affair, i.e. medical personnel only (this, however, included the dentists, veterinary surgeons and Service personnel who may be invited by members. A blanket invitation is being made to all Service M.D.'s.)

Dr. Patterson, chairman of the library committee, reported that about three to four hundred additional journals have been added to the library.

Dr. Balfour brought up the subject of expert testimony. Dr. Cloward pointed out that when a doctor is summoned to court he need only testify as to facts and that as soon as he is asked for an opinion on a hypothetical case, he can refuse to answer unless the court wishes to appoint him as an expert witness, in which case he would be entitled to expert witness' fees.

Dr. Tompkins discussed the current movement toward placing all tuberculosis sanitaria under Territorial control by the Board of Health. This matter will be brought up again in the future.

Dr. von Asch gave a report for the treasurer which was accepted.

Dr. K. Izumi reported for the nominating committee as follows:

Dr. George von Asch, President
Dr. Wm. D. Balfour, Vice-president.
Dr. John Sanders, Secy.-Treasurer.

These men were elected unanimously to serve for the next year.

Dr. Cloward addressed the society on head injuries.

Dr. Florine addressed the society on spinal cord tumors.

GEORGE VON ASCH, M.D.,
Secretary

In the Management of Subacute Bacterial Endocarditis

BARELY a year ago the reports regarding the use of penicillin in subacute bacterial endocarditis were hardly optimistic. Outstanding clinicians doubted if more than temporary sterilization of the blood stream could be expected. When the wider availability of penicillin permitted more intensive and prolonged therapy, endocarditis in many instances yielded. As recent publications show,* this serious infection, heretofore practically hopeless, no longer need be considered so.

Since very large amounts of penicillin over long periods are required in the treatment of bacterial endocarditis, the purity of the drug administered (number of Oxford Units per milligram of substance) appears of importance. The high degree of purity accomplished in Penicillin-C.S.C. merits the physician's preference for Penicillin-C.S.C. in the management of bacterial endocarditis as well as in other indications.

Physicians are invited to send for this comprehensive brochure. • The Penicillin-C.S.C. Reporter, presenting abstracts of the world literature, is periodically mailed to all physicians. Notify us, if it has not been received.

*Collins, B. C.: Subacute Bacterial Endocarditis Treated with Penicillin, J.A.M.A. 126:233 (Sept. 23) 1944.

MacNeal, W. J.; Blevins, A., and Poindexter, C. A.: Clinical Arrest of Endocarditis Lenta by Penicillin, Am. Heart J. 28:669 (Nov.) 1944.

Zimmerman, S. L., and Barnett, R. N.: Case of Probable Meningococcus Endocarditis Apparently Cured with Penicillin, South. M. J. 37:694 (Dec.) 1944.

Herrell, W. E., and Kennedy, R. L. J.: Penicillin: Its Use in Pediatrics, J. Pediat. 25:505 (Dec.) 1944.

Dawson, M. H., and Hunter, T. H.: The Treatment of Subacute Bacterial Endocarditis with Penicillin, J.A.M.A. 127:129 (Jan. 20) 1945.

Nahum, L. H., and Doff, S. D.: Recent Advances in the Treatment of Heart Disease, Connecticut M. J. 9:3 (Jan.) 1945.

Poindexter, C. A.: The Use of Penicillin in the Treatment of Subacute Bacterial Endocarditis, reproduced by permission of the American Heart Association in J. Arkansas M. Soc. 41:165 (Jan.) 1945.

White, P. D.; Mathews, M. W., and Evans, E.: Notes on the Treatment of Subacute Bacterial Endocarditis Encountered in 88 Cases at the Massachusetts General Hospital During the Six Year Period 1939 to 1944 (Inclusive), Ann. Int. Med. 22:61 (Jan.) 1945.

CSC

PHARMACEUTICAL DIVISION

COMMERCIAL SOLVENTS *Corporation*

17 East 42nd Street New York 17, N. Y.

PENICILLIN-C.S.C.

LIBRARY NOTES

THE HONOLULU COUNTY MEDICAL LIBRARY

MRS. ETHEL HILL, Librarian

MISS DORIS T. YASUTAKE, Library Assistant

8:00 A.M.-4:30 P.M. Phone 65370 7:30 P.M.-9:30 P.M.

RECENT ACQUISITIONS

By purchase:

Adams, R. C.: *Intravenous anesthesia.* c1944.
Alvarez, W. C.: *Nervousness, indigestion and pain.* c1943.
Babkin, B. P.: *Secretory mechanism of the digestive glands.* c1944.
Bierman, William: *Physical medicine in general practice.* c1944.
Christopher, Frederick: *Minor surgery.* 5th ed. c1944.
Christopher, Frederick: *Textbook of surgery.* 3rd ed. c1942.
Conant, N. F.: *Manual of clinical mycology.* c1944.
Craig, C. F.: *Etiology, diagnosis and treatment of amebiasis.* c1944.
de Lorimer, A. A.: *The arthropathies.* c1943.
Dunbar, Flanders: *Psychosomatic diagnosis.* c1943.
Duncan, G. G.: *Diseases of metabolism.* c1942.
Ewing, James: *Neoplastic diseases.* 4th ed. c1940.
Huhner, Max: *Diagnosis and treatment of sexual disorders.* c1943.
Kennedy, J. W.: *Vaginal hysterectomy.* c1944.
Kessler, H. H.: *Accidental injuries.* c1941.
Levine, S. A.: *Clinical heart disease.* 3rd ed. c1945.
Lichtman, S. S.: *Diseases of the liver, gallbladder and bile ducts.* c1942.
Lyle, D. G.: *Neuro-ophthalmology.* c1945.
The Merck Index. 5th ed. c1940.
Myerson, M. C.: *Tuberculosis of the ear, nose and throat.* c1944.
Orr, T. G.: *Operations of general surgery.* c1944.
Pacific Islands Year Book. c1944.
Quarterly cumulative index medicus. v.35. 1944.
Simmons, J. S.: *Global epidemiology.* 1944.
Solomon, H. C.: *Manual of military neuropsychiatry.* c1944.
Steindler, Arthur: *Orthopedic operations.* c1940.
Thorek, Max: *Modern surgical technic.* 3v. c1938.
Unger, Leon: *Bronchial asthma.* c1945.
Vasconcelos, Edmundo: *Modern methods of amputation.* c1945.
Wiggers, C. J.: *Physiology in health and disease.* 4th ed. c1944.

From the NURSES' ASSOCIATION

Gardner, M. S.: *Public health nursing.* 3rd ed. c1936.
Goodman, Louis: *The pharmacological basis of therapeutics.* c1941.
Gregg, A. L.: *Tropical nursing.* 2nd ed. c1944.
Harmer, Bertha: *Textbook of the principles and practice of nursing.* c1939.
Kolmer, J. A.: *Clinical diagnosis by laboratory examinations.* c1944.
Shands, A. R.: *Handbook of orthopaedic surgery.* c1940.
Weiss, Edward: *Psychosomatic medicine.* c1943.

From the library of DR. JAMES T. WAYSON

Jacobson, H. P.: *Fungous diseases.* c1932.
Jordan, E. P.: *Standard nomenclature of disease.* c1942.
Lewis, G. M.: *An introduction to medical mycology.* c1939.
Poulton, E. P.: *Taylor's practice of medicine.* 15th ed. c1936.
Semon, H. C. G.: *Atlas of the commoner skin diseases.* c1934.
Woodruff, C. E.: *Effects of tropical light on white men.* c1905.
Back files of:
International Clinics
Journal of Cutaneous Disesases
Mededeelingen van den dienst der volksgezondheid in Nederlandsch-Indie
Memorias do instituto Oswaldo Cruz
Transactions of the Royal Society of Tropical Medicine and Hygiene
Reprints and pamphlets on leprosy and allied diseases

From DR. ALBERT M. OKUMURA

Back files of:
American Journal of Ophthalmology
Annals of Otology, Rhinology and Laryngology
Archives of Ophthalmology
Archives of Otolaryngology
Bulletin of Practical Ophthalmology
Digest of Ophthalmology and Otolaryngology
Eye, Ear Nose and Throat Monthly
Laryngoscope

From DR. I. L. TILDEN

American Journal of Clinical Pathology (subscription and back files)

From DR. H. S. DICKSON

British Medical Journal (missing and duplicate copies)

From MISS DOROTHEA L. TAYLOR

Abt, J. A.: *Baby doctor.* c1944.
Sigerist, H. E.: *Civilization and disease.* c1943.

From the LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE

Buxton, P. A.: *Researches in Polynesia and Melanesia* 2v. c1928.

Reprints and pamphlets on leprosy and tropical medicine

From the U.S. PUBLIC HEALTH SERVICE

Back files of:

American Journal of Tropical Medicine
Arquivos de Hygiene
Boletin de la Oficina Sanitaria Panamericana
International Journal of Leprosy
Journal of Infectious Diseases
Leprosy in India

From DR. NILS P. LARSEN

Back files of:

Braithwaite's *Retrospect of Practical Medicine & Surgery*
Medical Journal of Australia
Oriental Journal of Diseases of Infants
Puerto Rico Review of Public Health and Tropical Medicine
Scientific Reports of the Government Institute for Infectious Diseases (Tokyo)

Reprints and pamphlets on various subjects

From DR. ROGERS LEE HILL

Back files of:

American Journal of Cancer
American Journal of Surgery
Archives of Surgery
Journal of Thoracic Surgery
Surgery

From DR. S. S. KATSUKI

Archives of Internal Medicine (back files)

Mrs. Charles B. Cooper has presented the Library with *An Atlas of Venereal and Skin Diseases* by James C. Johnston. This book was given in memory of her husband, Dr. Charles B. Cooper. An "in memoriam" book plate will be inserted, and the volume placed on display in the library.

We have been notified by Dr. Carl Stroven of the University of Hawaii Library, that the University has approved the purchase of a complete back file of the *Journal of Clinical Investigation*. The Honolulu County Medical Library has subscribed to this journal, and issues from January 1944 to date are now available for use.

Dr. Stroven also cordially invites all members of the Medical Society to use their files of medical journals, or any other material in the University Library. The circulation rules are simple: any physician may draw out the volumes he needs for two weeks, subject to renewal by phone for another two weeks.

JOURNALS CURRENTLY RECEIVED

The following journals are being *currently* received in the Library. Please add them to the list previously published in the November-December 1944 issue.

American Journal of Clinical Pathology (gift of DR. I. L. TILDEN)
American Journal of Digestive Diseases (gift of DR. KYURO OKAZAKI)
American Review of Soviet Medicine
Archives of Ophthalmology (gift of THE CLINIC)
Archives of Otolaryngology (gift of THE CLINIC)
Archives of Pathology (gift of THE CLINIC)
British Journal of Surgery
Bulletin of Hygiene
Bulletin of the Oficina Sanitaria Pan Americana (gift of U. S. PUBLIC HEALTH SERVICE)
Endocrinology
International Journal of Leprosy (gift of DR. H. L. ARNOLD, JR.)
Journal of Clinical Investigation
Journal of the Iowa State Medical Society
Journal of Pediatrics (gift of NURSES' ASSOCIATION)
Modern Medicine
Southern Medical Journal
Tropical Diseases Bulletin
West Virginia Medical Journal

NOTES AND NEWS

REAR ADMIRAL C. B. CAMERER

The promotion of Captain C. B. Camerer, M.C., U.S.N., District Medical Officer of the Fourteenth Naval Disctrict, to the rank of Rear Admiral, has recently been announced.

Admiral Camerer is a graduate of St. Louis University Medical School in the class of 1908, and is also a graduate of the Naval Medical School. He is in his thirty-sixth year of naval service. His specialty is eye, ear, nose and throat.

RAYMOND G. NEBELUNG

Dr. Raymond G. Nebelung, Doctor of Public Health, formerly a member of the faculty of the School of Hygiene and Public Health at the University of Michigan, where he received his training, and subsequently at Oregon State University, was recently appointed Executive Director of the Public Health Committee of the Chamber of Commerce of Honolulu.

Dr. Nebelung served as District Public Health Officer of the Thirteenth Naval District from March 1942 until February 1943, when he was transferred to a similar position in the Fourteenth Naval District. He has held the rank of Lieutenant Commander, U.S.N.R., since April 1944. In December 1944 he was placed on inactive duty by Admiral Chester W. Nimitz in order to permit him to assume his present duties.

The program of the Public Health Committee, under Dr. Nebelung's direction, will be one of cooperation with organized medicine and official and voluntary health agencies in the interests of over-all, long-range planning and development of coordinated programs in community health work.

PATHOLOGISTS' MEETING

The Hawaii Society of Clinical Pathologists held a seminar meeting on the evening of February 23, 1945, at Tripler General Hospital, Farrington Division. Nine cases, 3 from North Sector General Hospital, 2 from Tripler General Hospital, 2 from The Queen's Hospital, and 2 from St. Francis Hospital, were discussed. Slides on these cases, previously mailed to the men attending, were projected upon a screen. A set of sections was also mailed to pathologists on Guam and Leyte previously stationed in Hawaii. The following persons were present: Lt. Col. Tell Nelson, M.C., A.U.S., Lt. Col. C. S. Moran, M.C., A.U.S., Major David L. Adler, M.C., A.U.S., Capt. L. E. Field, M.C., A.U.S., Capt. William Levison, M.C., A.U.S., Lt. Col. Elson B. Helwig, M.C., A.U.S., Lt. Col. Geo. T. Rich, M.C., A.U.S., Capt. Ralph G. Brown, M.C., A.U.S., Capt. Henry S. Bernet, M.C., A.U.S., Lt. Col. Carl F. Tessmer, M.C., A.U.S., Major Henry E. Davidson, M.C., A.U.S., Col. J. E. Fish, M.C., A.U.S., Capt. Fred Dick, Jr., M.C., A.U.S., Cmdr. E. J. Losli, M.C., U.S.N.R., Dr. E. A. Fennel, Dr. Sumner Price, Dr. Thomas Chang, Dr. I. L. Tilden, and Dr. M. Barnes.

DERMATOLOGISTS' MEETING

The sixth quarterly meeting of the Hawaii Dermatological Society was held on Saturday, March 10, 1945, at 881 South Hotel Street. Twelve cases were presented and discussed; a transcription of the discussions will eventually be published in the Archives of Dermatology and Syphilogy.

Those present at the meeting were: Dr. Harold M. Johnson, Lt. Col. Carl Tessmer, M.C., A.U.S., Major Tibor Benedek, M.C., A.U.S., (by invitation), Major Gerard De Oreo, M.C., A.U.S., Capt. Herbert Lawrence, M.C., A.U.S., Capt. Irving Holtzman, M.C., A.U.S., (by invitation), Capt. Fred Licks, M.C., A.U.S., (by invitation), and Dr. Harry L. Arnold, Jr. The three Navy dermatologists known to be stationed in Hawaii were unable to be present.

The office of President of the organization, vacated by the recent death of the incumbent, Dr. James T. Wayson, was not filled.

The high spot of the meeting was the presentation by Major Benedek and Major De Oreo of an example of an extremely rarely diagnosed disorder, known as hyperkeratosis follicularis et parafollicularis in cutem penetrans (Kyrle).

The next meeting of the Society will be held on Saturday, June 9, 1945, at 1:00 P.M., at the same location. Notification by post card two weeks in advance of the meeting will be made on request to either Dr. Johnson or Dr. Arnold.

DR. ARTHUR A. ST. MAUR MOURITZ

Dr. Arthur A. St. Maur Mouritz, M.D., M.R.C.S., M.R.C.P., D.Lit., kamaaina dean of Honolulu physicians and contemporary of Father Damien, the "Martyr of Molokai," died on December 1, 1944, at St. Francis Hospital, after having been in poor health for a long time.

Dr. Mouritz was born in London, England, and was 88 years old when he died.

He studied at Cambridge and at the Paris Academy, where he worked under the great Charcot. He began his medical career at the age of 16 at Oxford University. Completing his education, he was given the rank of second lieutenant in the British navy and sent to Africa to assist in the stamping out of malaria there.

After completing his work in Africa, Dr. Mouritz was, for two years, ship's physician on sailing clippers and steamers of the Dutch India Company on the South American run.

He came to Hawaii in 1883 as ship's physician on the steamer Abergeldie on which a large number of Portuguese agriculturists came to Hawaii, and decided to remain here.

Shortly after his arrival King Kalakaua requested him to take a stricken English plague ship, which had arrived from Hong Kong, China, to sea to free it of smallpox. The vessel was at sea ten days and on its return was pronounced by the Hawaiian health authorities as again free of disease.

After four years at Kalaupapa, where he was a co-worker with Father Damien, Dr. Mouritz spent a dozen years in leeward Molokai, continuing as consulting expert to Kalaupapa Settlement. He served as an expert inspector of the Goto leprosy treatment in 1893, 1894, and 1895, and it was his opinion that the treatment which at the time had given hopes of great beneficial results, was more harmful than helpful. Eventually the treatment was discontinued. Dr. Mouritz spent 19 of his 50 years in Hawaii on Molokai.

In 1916 he published a *History of Leprosy in the Hawaiian Islands,* now out of print. Another interesting work was a story of Hawaii's revolutions which resulted in the overthrow of the monarchy, the dethronement of Queen Liliuokalani, establishment of the provisional government, creation of the Republic of Hawaii, annexation to the United States and the establishment of the present Territory of Hawaii 45 years ago. Among his other writings were: *Historical Castles,* London, 1882; *The Tragedy of the Careless,* Cincinnati, 1906; *The Path of the Destroyer,* Honolulu, 1916; *Brief World's History of Influenza,* Honolulu, 1920; *The Conquest of Smallpox,* Honolulu, 1924; and *Our Western Outpost,* Honolulu, 1935.

Dr. Mouritz was the principal witness before the ecclesiastic court held here in 1938 on the life work of the "Martyr of Molokai."

Dr. Mouritz was a widower, and is survived by a son, Desmond, and a daughter, Nora.

In recent years he busied himself with his patients, living very modestly.

He was conspicuous by his straight carriage and brilliant mind, which continued almost to the end.

L. A. R. GASPAR, JR., M.D.

DR. L. R. GASPAR

Dr. L. R. Gaspar expired on November 24, 1944, in Oakland, California, following a prolonged illness.

Born in Funchal, Madeira Islands, Portugal, on April 16, 1874, he received his education in Funchal Medical School and the University of Coimbra in continental Portugal, and then attended the University of Brussels.

He married Maria Isabel Rodrigues on July 17, 1902.

In 1909, following a severe epidemic of smallpox in Funchal, Madeira Islands, in which he lost a daughter, age 3, he came to Hawaii as surgeon of an immigrant liner. He liked the place so well that he returned in 1910 with his wife and son.

He practiced continuously here from 1910 to 1941, when he suddenly became ill.

Dr. Gaspar was vitally interested in the Portuguese community, and gave up his specialty in nose and throat to carry on general practice in the Portuguese colony.

Dr. Gaspar was also Consul of Cuba in Honolulu for many years.

He is survived by his wife and son, Dr. L. A. R. Gaspar, and three grandchildren.

L. A. R. GASPAR, JR., M.D.

PROCUREMENT AND ASSIGNMENT

It has recently been announced by Dr. F. J. Pinkerton, chairman of Procurement and Assignment for the Territory of Hawaii, that 15 physicians from the Territory have entered the Army or Navy medical corps since February 1944 and approximately 15 more of our local doctors will enter the services during the next few weeks.

Of those who have already been commissioned upon statement of availability from Procurement and Assignment, Dr. Louis Hirsch of Hilo, Hawaii is now serving in the Army.

The remaining 14 doctors commissioned were all from Honolulu County. Those serving in the Army are Dr. Anthony John Brunse, Dr. Raymond Dusendschon, Dr. Norman Reichert East, Dr. Robert Paul Gallagher, Dr. Philip W. Hursh, Dr. William S. Ito, Dr. Edward K. S. Lau, Dr. James Wong and Dr. Richard W. You.

Serving in the Navy medical corps are Dr. Robert F. Bailey, Dr. Colin C. McCorriston, Dr. James Alvin Mitchell, Dr. William M. Walsh and Dr. Frederick B. Warshauer.

Recent additions to the staff of internes at The Queen's Hospital were Dr. Nyla Ruth Elnes and Dr. Grace Hall Hedgcock, both of Women's Medical College of Pennsylvania, who came to work here April 10, 1945. The last previous addition to the staff was Dr. Harry D. Ellis, of Indiana University School of Medicine, who started his service January 15, 1945.

Dr. Harold M. Johnson has recently been vacationing on the Island of Hawaii. He addressed the Hawaii County Medical Society on the subject of the Diagnosis and Management of Some Common Dermatoses.

Dr. and Mrs. Guy C. Milnor are traveling on the mainland and expect to return to Honolulu about September 1. At that time they will bring their son John with them to serve his interneship at the Queen's Hospital. He will graduate on June 20 from Temple University. Dr. and Mrs. Milnor plan to visit San Francisco, New York, Philadelphia, Harrisburg, Pa., the Mayo Clinic and Seattle.

Dr. and Mrs. H. L. Arnold, Sr., are on vacation on the mainland. They have been visiting in Ann Arbor and Detroit and are now staying with Dr. Arnold's father and brother, Drs. A. L. Arnold, Sr., and Jr., in Owosso, Michigan.

Dr. and Mrs. Robert Wong of Honolulu welcomed the arrival of their first child on May 11. The baby is named Stephen Willis Wong and weighed 7 pounds 9 ounces at birth.

DEFINITELY A SUCCESS

It was the consensus of opinion that the recent convention of the Hawaii Medical Association was productive of definite and substantial results.

We take this occasion to congratulate the Association on the success of the gathering and to express our appreciation for the opportunity afforded representatives of the Drug Department of American Factors, Ltd., to meet personally the members of the profession in attendance.

AMERICAN FACTORS, LTD.

Drug Department

FORT AND QUEEN STREETS, HONOLULU • TELEPHONE 1241

Representing in Hawaii

ROCHE ORGANON
JOHNSON & JOHNSON
HOFFMAN LA ROCHE
ABBOTT LABORATORIES
THE BOVININE COMPANY
DAVOL RUBBER COMPANY
THE S.M.A. CORPORATION
LEDERLE LABORATORIES, INC.
JOHN WYETH & BROTHER, INC.
INTERNATIONAL VITAMINS CORP.
MALLINCKRODT CHEMICAL WORKS